

**Product name:** HaloPlex HS Target Enrichment Kits - ILM - 96 reactions  
**Part no.:** G9931B, G9941B, G9951B

This product is composed of the following:

### Kit Components, Reagents

Box/Module Part number	Box/Module Name	Kit Component Part Number	Kit Component Name	Qty Units	CLP
5190-7847/5190-7849	HaloPlex HS 1-500kb	5190-5357	Enzyme Strip 1	1	No
5190-7851/5190-7853	HaloPlex HS 0.5-2.5 Mb	5190-5358	Enzyme Strip 2	1	No
5190-7855/5190-7857	HaloPlex HS 2.6-5Mb	5190-7846/5190-7848	HaloPlex HS Probe ILM	1	No
		5190-7850/5190-7852	HaloPlex HS Probe ILM	1	No
		5190-7854/5190-7856	HaloPlex HS Probe ILM	1	No
		5190-7972	RE Buffer	1	No
		5190-7973	re-Albumin Solution	1	No
		5190-7976	Enrichment Control DNA	1	No
		5190-7977	Hybridization Solution	1	Yes
		5190-7978	HS Hybridization Stop Solution	1	No
		5190-7979	10 mM rATP	1	No
		5190-7980	HS Ligation Solution	1	No
		5190-7981	HS DNA Ligase	1	Yes
		5190-7982	HS Capture Solution	1	No
		5190-7983	HS Wash 1 Solution	1	No
		5190-7986	HS Wash 2 Solution	2	No
		5190-7987	Primer 1	1	No
		5190-7988	Primer 2	1	No
		5190-7989	HS Elution Buffer	2	No
5190-7990	Herculase II Fusion DNA Polymerase	1	No		
5190-7991	Herculase II Reaction Buffer	1	No		
5190-7992	100 mM dNTP Mix	1	No		
5190-9461	HaloPlex HS ILM Indexing Plate	1	No		

Article SDSs, if maintained, are available on [www.agilent.com](http://www.agilent.com). We recommend using the article product code when searching. SDSs are only available for a limited set of countries.

### Transport Information for the Kit:

**Dangerous Goods classification for:** G9931B, G9941B, G9951B

ADR/RID	IMDG	IATA
Not regulated.	Not regulated.	Not regulated.

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SDSs for each individual Kit component follow this cover sheet.

# SAFETY DATA SHEET

RE Buffer

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : RE Buffer  
**Part no.** : 5190-7972

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
3.3 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%  
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

RE Buffer

## SECTION 2: Hazards identification

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

### Special packaging requirements

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

RE Buffer

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**RE Buffer****SECTION 7: Handling and storage****7.2 Conditions for safe storage, including any incompatibilities**

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

**Recommendations** : Industrial applications, Professional applications.

**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

**Biological exposure indices**

No exposure indices known.

**Recommended monitoring procedures**

: Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Not available.

**PNECs**

Not available.

**8.2 Exposure controls**

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

RE Buffer

## SECTION 8: Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : 7.9
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b> :	<b>Media</b>	<b>Result</b>
	water	Soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Vapour pressure** : 2.3 kPa (17.5 mm Hg) [Based on solvent.]
- Relative density** : Not available.
- Relative vapour density** : Not available.
- Particle characteristics**
- Median particle size** : Not applicable.

RE Buffer

## SECTION 9: Physical and chemical properties

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

#### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

**Skin**

**Conclusion/Summary [Product]** : Not available.

RE Buffer

## SECTION 11: Toxicological information

### Respiratory

Conclusion/Summary : Not available.  
[Product]

### Germ cell mutagenicity

Conclusion/Summary : Not available.  
[Product]

### Carcinogenicity

Conclusion/Summary : Not available.  
[Product]

### Reproductive toxicity

Conclusion/Summary : Not available.  
[Product]

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

### Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

#### Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

### Potential chronic health effects

Conclusion/Summary : Not available.  
[Product]

RE Buffer

## SECTION 11: Toxicological information

- General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

- Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

- Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

- Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

- Mobility** : Not available.  
**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

- Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP]** : The product does not meet the criteria to be considered as a PBT or vPvB.

### 12.6 Endocrine disrupting properties

- Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

**RE Buffer**

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

RE Buffer

## SECTION 15: Regulatory information

**Labelling** : Not applicable.

### Other EU regulations

#### Ozone depleting substances (EU 2024/590)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Persistent Organic Pollutants

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: <input checked="" type="checkbox"/> Not determined.
<b>China</b>	: Not determined.
<b>Eurasian Economic Union</b>	: <input checked="" type="checkbox"/> <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Philippines</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: <input checked="" type="checkbox"/> Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**RE Buffer**

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

- Abbreviations and acronyms**
- : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available
  - P = Persistent
  - PBT = Persistent, Bioaccumulative and Toxic
  - PMT = Persistent, Mobile and Toxic
  - PNEC = Predicted No Effect Concentration
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - T = Toxic
  - vB = Very Bioaccumulative
  - vM = Very Mobile
  - vP = Very Persistent
  - vPvB = Very Persistent and Very Bioaccumulative
  - vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**

Not applicable.

**Full text of classifications [CLP/GHS]**

Not applicable.

- Date of issue/ Date of revision** : 27/11/2025
- Date of previous issue** : 23/05/2025
- Version** : 1.1

**Notice to reader**

**Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.**

# SAFETY DATA SHEET

re-Albumin Solution

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : re-Albumin Solution  
**Part no.** : 5190-7973

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.07 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

re-Albumin Solution

## SECTION 2: Hazards identification

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥25 - ≤50	Not classified.  <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

re-Albumin Solution

## SECTION 4: First aid measures

### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** :  Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**re-Albumin Solution**

**SECTION 6: Accidental release measures**

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).  
**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

**Recommendations** : Industrial applications, Professional applications.  
**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

Product/ingredient name	Exposure limit values
glycerol	NAOSH (Ireland, 4/2024) Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 10 mg/m <sup>3</sup> . Form: mist.

**Biological exposure indices**

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Not available.

**PNECs**

**SECTION 8: Exposure controls/personal protection**

Not available.

**8.2 Exposure controls**

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties****Appearance**

**Physical state** : Liquid.

**Colour** : Not available.

**Odour** : Not available.

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flammability** : Not applicable.

**Lower and upper explosion limit/flammability limit** : Not available.

**Flash point** :

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## SECTION 9: Physical and chemical properties

	Ingredient name	Closed cup		Open cup			
		°C	Method	°C	Method		
	glycerol	-	-	177	-		
<b>Auto-ignition temperature</b>	<b>Ingredient name</b>	<b>°C</b>		<b>Method</b>			
	glycerol	370		-			
<b>Decomposition temperature</b>	: Not available.						
<b>pH</b>	: 7						
<b>Viscosity</b>	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not available.						
<b>Solubility</b>	<b>Media</b>	<b>Result</b>					
	water	Soluble					
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.						
<b>Vapour pressure</b>	<b>Ingredient name</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>		
		<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	water	17.5	2.3	-	92.258	12.3	-
	glycerol	0.000075	0.00001	-	0.0025	0.00033	-
<b>Relative density</b>	: Not available.						
<b>Relative vapour density</b>	: Not available.						
<b>Particle characteristics</b>							
<b>Median particle size</b>	: Not applicable.						

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

#### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

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## SECTION 10: Stability and reactivity

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### Skin

**Conclusion/Summary [Product]** : Not available.

##### Respiratory

**Conclusion/Summary [Product]** : Not available.

#### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

#### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

#### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

*re-Albumin Solution***SECTION 11: Toxicological information**

Not available.

**Information on likely routes of exposure** : Not available.**Potential acute health effects****Eye contact** : No known significant effects or critical hazards.**Inhalation** : No known significant effects or critical hazards.**Skin contact** : No known significant effects or critical hazards.**Ingestion** : No known significant effects or critical hazards.**Symptoms related to the physical, chemical and toxicological characteristics****Eye contact** : No specific data.**Inhalation** : No specific data.**Skin contact** : No specific data.**Ingestion** : No specific data.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Long term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Potential chronic health effects****Conclusion/Summary [Product]** : Not available.**General** : No known significant effects or critical hazards.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.**Reproductive toxicity** : No known significant effects or critical hazards.**11.2 Information on other hazards****11.2.1 Endocrine disrupting properties****Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.**SECTION 12: Ecological information****12.1 Toxicity****Conclusion/Summary [Product]** : Not available.**12.2 Persistence and degradability**

Not available.

**Conclusion/Summary [Product]** : Not available.**12.3 Bioaccumulative potential**

Not available.

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## SECTION 12: Ecological information

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-

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**SECTION 14: Transport information**

<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

**Other EU regulations**

**Ozone depleting substances (EU 2024/590)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

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## SECTION 15: Regulatory information

Not listed.

### Inventory list

<b>Australia</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Canada</b>	: <input checked="" type="checkbox"/> Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <input checked="" type="checkbox"/> <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <input checked="" type="checkbox"/> <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Philippines</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Republic of Korea</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: <input checked="" type="checkbox"/> Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- B = Bioaccumulative
- BCF = Bioconcentration Factor
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- IATA = International Air Transport Association
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- M = Mobile
- N/A = Not available
- P = Persistent
- PBT = Persistent, Bioaccumulative and Toxic
- PMT = Persistent, Mobile and Toxic
- PNEC = Predicted No Effect Concentration
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- RRN = REACH Registration Number
- SGG = Segregation Group
- T = Toxic
- vB = Very Bioaccumulative
- vM = Very Mobile
- vP = Very Persistent
- vPvB = Very Persistent and Very Bioaccumulative
- vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

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## SECTION 16: Other information

Classification	Justification
Not classified.	

### Full text of abbreviated H statements

Not applicable.

### Full text of classifications [CLP/GHS]

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

### Notice to reader

**Disclaimer:** The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

Enrichment Control DNA

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : Enrichment Control DNA  
**Part no.** : 5190-7976

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.615 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Enrichment Control DNA**

**SECTION 2: Hazards identification**

Special packaging requirements

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed**

Over-exposure signs/symptoms

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

**Enrichment Control DNA**

**SECTION 5: Firefighting measures**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Enrichment Control DNA**

**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
	water	17.5	2.3	-	92.258	12.3	-

**Relative density** : Not available.

**Relative vapour density** : Not available.

Particle characteristics

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

**Enrichment Control DNA**

**SECTION 9: Physical and chemical properties**

**Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute toxicity

**Conclusion/Summary [Product]** : Not available.

**Acute toxicity estimates**

N/A

Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

Respiratory or skin sensitization

**Skin**

**Conclusion/Summary [Product]** : Not available.

**Respiratory**

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**Enrichment Control DNA**

**SECTION 11: Toxicological information**

**11.2 Information on other hazards**

**11.2.1 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Conclusion/Summary [Product]** : Not available.

**12.2 Persistence and degradability**

Not available.

**Conclusion/Summary [Product]** : Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient**

Not available.

**Results of PMT and vPvM assessment**

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

**12.5 Results of PBT and vPvB assessment**

**Regulation (EC) No. 1907/2006 [REACH]**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

**12.6 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

**Enrichment Control DNA**

**SECTION 13: Disposal considerations**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
[EU Regulation \(EC\) No. 1907/2006 \(REACH\)](#)

[Annex XIV - List of substances subject to authorisation](#)

[Annex XIV](#)

[Substances of very high concern](#)

None of the components are listed.

[Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles](#)

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

[Other EU regulations](#)

**Enrichment Control DNA**

**SECTION 15: Regulatory information**

**Ozone depleting substances (EU 2024/590)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**


Not listed.

**Inventory list**

- Australia** : Not determined.
- Canada** : Not determined.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory**: Not determined.
- Japan** : **Japan inventory (CSCL)**: Not determined.  
**Japan inventory (ISHL)**: All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : All components are listed or exempted.
- United States** : All components are active or exempted.
- Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE = Acute Toxicity Estimate  
 B = Bioaccumulative  
 BCF = Bioconcentration Factor  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

Enrichment Control DNA

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025  
**Date of previous issue** : 23/05/2025  
**Version** : 1.1

[Notice to reader](#)

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# SAFETY DATA SHEET

Hybridization Solution

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Hybridization Solution  
**Part no.** : 5190-7977

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
 4.9 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
 Hewlett-Packard-Str. 8  
 76337 Waldbronn  
 Germany  
 0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

H351	CARCINOGENICITY	Category 2
H360D	REPRODUCTIVE TOXICITY	Category 1B
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	Category 2

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H351 - Suspected of causing cancer.  
 H360D - May damage the unborn child.  
 H373 - May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

**Prevention** : P201 - Obtain special instructions before use.  
 P280 - Wear protective gloves, protective clothing and eye or face protection.  
 P260 - Do not breathe vapour.

**Response** : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

**Hybridization Solution**

**SECTION 2: Hazards identification**

- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazardous ingredients** : formamide
- Supplemental label elements** : Not applicable.
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.
- Special packaging requirements**
  - Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
formamide	EC: 200-842-0 CAS: 75-12-7	≥25 - ≤50	Carc. 2, H351 Repr. 1B, H360D STOT RE 2, H373 (blood) (oral) <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1] [2] [3]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance with carcinogenic, mutagenic or reproductive toxicity properties

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Hybridization Solution**

**SECTION 4: First aid measures**

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**4.2 Most important symptoms and effects, both acute and delayed**

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hybridization Solution**

**SECTION 5: Firefighting measures**

**Hazardous combustion products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen oxides  
 halogenated compounds  
 metal oxide/oxides

**5.3 Advice for firefighters**

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
 See Section 8 for information on appropriate personal protective equipment.  
 See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Do not breathe vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid exposure during pregnancy.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Hybridization Solution

**SECTION 7: Handling and storage**

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

**Recommendations** : Industrial applications, Professional applications.

**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Occupational exposure limits

Product/ingredient name	Exposure limit values
formamide	<b>NAOSH (Ireland, 4/2024)</b> Repr 1B. Absorbed through skin. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 10 ppm. OELV 8 hours: 18 mg/m <sup>3</sup> .

Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures**

: Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result	
formamide	DNEL - Workers - Long term - Dermal	0.952 mg/kg bw/day
	DNEL - Workers - Long term - Inhalation	6.6 mg/m <sup>3</sup>

PNECs

Not available.

**8.2 Exposure controls**

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Hybridization Solution**

**SECTION 8: Exposure controls/personal protection**

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
  
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
  
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
  
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
  
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
  
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

**Appearance**

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** :

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
formamide	150	-	152	DIN EN ISO 2592

Ingredient name	°C	Method
formamide	>500	ASTM D 2155-66

**Decomposition temperature** : Not available.

**pH** : 7.5

**Hybridization Solution**

**SECTION 9: Physical and chemical properties**

**Viscosity** : Dynamic (room temperature): Not available.  
 Kinematic (room temperature): Not available.  
 Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

<b>Vapour pressure</b>	<b>Ingredient name</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>		
		<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	water	17.5	2.3	-	92.258	12.3	-
	formamide	0.045	0.006	-	-	-	-

**Relative density** : Not available.

**Relative vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute toxicity

<b>Product/ingredient name</b>	<b>Result</b>	
formamide	Rabbit - Dermal - LD50	17 g/kg
	Rat - Oral - LD50	5570 mg/kg
	Rat - Male - Inhalation - LC50 Dusts and mists	>21 mg/l [4 hours]

**Conclusion/Summary [Product]** : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
formamide	5570	17000	N/A	N/A	N/A

Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

<b>Ingredient name</b>	<b>Conclusion/Summary</b>
formamide	May cause skin irritation.

Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

<b>Ingredient name</b>	<b>Conclusion/Summary</b>
formamide	May cause eye irritation.

Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

Respiratory or skin sensitization

**Skin Conclusion/Summary [Product]** : Not available.

**Respiratory Conclusion/Summary [Product]** : Not available.

Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
formamide	STOT RE 2, H373 (blood) (oral)

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

<b>Eye contact</b>	: No known significant effects or critical hazards.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: No known significant effects or critical hazards.
<b>Ingestion</b>	: No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: No specific data.
<b>Inhalation</b>	: Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
<b>Skin contact</b>	: Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
<b>Ingestion</b>	: Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

### Potential chronic health effects

<b>Conclusion/Summary [Product]</b>	: Not available.
<b>General</b>	: May cause damage to organs through prolonged or repeated exposure.
<b>Carcinogenicity</b>	: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: May damage the unborn child.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

Hybridization Solution

**SECTION 11: Toxicological information**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Result	
formamide	Acute - LC50 - Fresh water	6569 mg/l [96 hours]
	Acute - NOEC - Fresh water	4640 mg/l [96 hours]
	Acute - EC50 - Fresh water	>500 mg/l [48 hours]
	Acute - NOEC - Fresh water	4640 mg/l [72 hours]
	Acute - EC50 - Fresh water	>500 mg/l [72 hours]

**Conclusion/Summary [Product]** : Not available.

**12.2 Persistence and degradability**

Product/ingredient name	Result	
formamide	Aerobic	99% [28 days] - Readily Aerobic

**Conclusion/Summary [Product]** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
formamide	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
formamide	-0.82	-	Low

**12.4 Mobility in soil**

**Soil/water partition coefficient**

Product/ingredient name	logK <sub>oc</sub>	K <sub>oc</sub>
formamide	0.51	3.21896

**Results of PMT and vPvM assessment**

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Formamide	N/A	N/A	Yes	Yes	N/A	N/A	Yes

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

**12.5 Results of PBT and vPvB assessment**

**Regulation (EC) No. 1907/2006 [REACH]**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Formamide	N/A	N/A	N/A	Yes	N/A	N/A	N/A

**Regulation (EC) No. 1272/2008 [CLP]**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Formamide	N/A	N/A	N/A	Yes	N/A	N/A	N/A

**Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP]** : The product does not meet the criteria to be considered as a PBT or vPvB.

**12.6 Endocrine disrupting properties**

Hybridization Solution

**SECTION 12: Ecological information**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Product

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	ADR/RID	IMDG	IATA
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**Hybridization Solution**

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

**Substances of very high concern**

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Formamide	Toxic to reproduction	Candidate	ED/87/2012	6/18/2012

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Restricted to professional users.

**Other EU regulations**

**Ozone depleting substances (EU 2024/590)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory**: All components are listed or exempted.
- Japan** : **Japan inventory (CSCL)**: All components are listed or exempted.  
**Japan inventory (ISHL)**: All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.

**Hybridization Solution**

**SECTION 15: Regulatory information**

- Turkey** : Not determined.
- United States** : All components are active or exempted.
- Viet Nam** : All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** :
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available
  - P = Persistent
  - PBT = Persistent, Bioaccumulative and Toxic
  - PMT = Persistent, Mobile and Toxic
  - PNEC = Predicted No Effect Concentration
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - T = Toxic
  - vB = Very Bioaccumulative
  - vM = Very Mobile
  - vP = Very Persistent
  - vPvB = Very Persistent and Very Bioaccumulative
  - vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Carc. 2, H351 Repr. 1B, H360D STOT RE 2, H373	Calculation method Calculation method Calculation method

**Full text of abbreviated H statements**

H351 H360D H373	Suspected of causing cancer. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.
-----------------------	--

**Full text of classifications [CLP/GHS]**

Carc. 2 Repr. 1B STOT RE 2	CARCINOGENICITY - Category 2 REPRODUCTIVE TOXICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
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**Date of issue/ Date of revision** : 27/11/2025

*Hybridization Solution*

## **SECTION 16: Other information**

**Date of previous issue** : 23/05/2025

**Version** : 1.1

### Notice to reader

**Disclaimer:** The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

HS Hybridization Stop Solution

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : HS Hybridization Stop Solution  
**Part no.** : 5190-7978

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
4 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**HS Hybridization Stop Solution**

**SECTION 2: Hazards identification**

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed**

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

## SECTION 7: Handling and storage

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** : Industrial applications, Professional applications.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

**HS Hybridization Stop Solution**

**SECTION 8: Exposure controls/personal protection**

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** :  Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b> :	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

<b>Vapour pressure</b> :	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>			
	<b>Ingredient name</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	<input checked="" type="checkbox"/> water	17.5	2.3	-	92.258	12.3	-

**HS Hybridization Stop Solution**

**SECTION 9: Physical and chemical properties**

**Relative density** : Not available.

**Relative vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

**Conclusion/Summary [Product]** : Not available.

**Acute toxicity estimates**

N/A

**Skin corrosion/irritation**

**Conclusion/Summary [Product]** : Not available.

**Serious eye damage/eye irritation**

**Conclusion/Summary [Product]** : Not available.

**Respiratory corrosion/irritation**

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Respiratory or skin sensitization

#### Skin

Conclusion/Summary : Not available.  
[Product]

#### Respiratory

Conclusion/Summary : Not available.  
[Product]

### Germ cell mutagenicity

Conclusion/Summary : Not available.  
[Product]

### Carcinogenicity

Conclusion/Summary : Not available.  
[Product]

### Reproductive toxicity

Conclusion/Summary : Not available.  
[Product]

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

### Potential acute health effects

Eye contact : No known significant effects or critical hazards.  
Inhalation : No known significant effects or critical hazards.  
Skin contact : No known significant effects or critical hazards.  
Ingestion : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.  
Inhalation : No specific data.  
Skin contact : No specific data.  
Ingestion : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

Potential immediate effects : Not available.  
Potential delayed effects : Not available.

#### Long term exposure

Potential immediate effects : Not available.  
Potential delayed effects : Not available.

## SECTION 11: Toxicological information

### Potential chronic health effects

- Conclusion/Summary** : Not available.  
**[Product]**
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

- Conclusion/Summary** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.  
**[Product]**

## SECTION 12: Ecological information

### 12.1 Toxicity

- Conclusion/Summary** : Not available.  
**[Product]**

### 12.2 Persistence and degradability

Not available.

- Conclusion/Summary** : Not available.  
**[Product]**

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

- Mobility** : Not available.  
**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

- Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.  
**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

- Conclusion/Summary** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.  
**[Product]**

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

##### Annex XIV

##### Substances of very high concern

None of the components are listed.

##### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

## SECTION 15: Regulatory information

**Labelling** : Not applicable.

### Other EU regulations

#### Ozone depleting substances (EU 2024/590)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Persistent Organic Pollutants

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: All components are listed or exempted.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

- Abbreviations and acronyms**
- : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available
  - P = Persistent
  - PBT = Persistent, Bioaccumulative and Toxic
  - PMT = Persistent, Mobile and Toxic
  - PNEC = Predicted No Effect Concentration
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - T = Toxic
  - vB = Very Bioaccumulative
  - vM = Very Mobile
  - vP = Very Persistent
  - vPvB = Very Persistent and Very Bioaccumulative
  - vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**

Not applicable.

**Full text of classifications [CLP/GHS]**

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

**Notice to reader**

**Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.**

# SAFETY DATA SHEET

10 mM rATP

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : 10 mM rATP  
**Part no.** : 5190-7979

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.04 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

10 mM rATP

**SECTION 2: Hazards identification****Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

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## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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**SECTION 7: Handling and storage****7.3 Specific end use(s)**

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

**Biological exposure indices**

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Not available.

**PNECs**

Not available.

**8.2 Exposure controls**

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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## SECTION 8: Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : 7
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	

- Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
		water	17.5	2.3	-	92.258	12.3

- Relative density** : Not available.
- Relative vapour density** : Not available.

#### Particle characteristics

- Median particle size** : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

- Explosive properties** : Not available.

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## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### **Skin**

**Conclusion/Summary [Product]** : Not available.

##### **Respiratory**

**Conclusion/Summary [Product]** : Not available.

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## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

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**SECTION 13: Disposal considerations**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
[EU Regulation \(EC\) No. 1907/2006 \(REACH\)](#)

[Annex XIV - List of substances subject to authorisation](#)

[Annex XIV](#)

[Substances of very high concern](#)

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

[Other EU regulations](#)

10 mM rATP

## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
B = Bioaccumulative  
BCF = Bioconcentration Factor  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

10 mM rATP

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025  
**Date of previous issue** : 23/05/2025  
**Version** : 1.1

[Notice to reader](#)

**Disclaimer:** The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

HS Ligation Solution

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : HS Ligation Solution  
**Part no.** : 5190-7980

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
1.5 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

**Ingredients of unknown ecotoxicity** : Contains 1.1% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

HS Ligation Solution

## SECTION 2: Hazards identification

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

### Special packaging requirements

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** : Decomposition products may include the following materials:  
halogenated compounds  
metal oxide/oxides

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

## SECTION 7: Handling and storage

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** : Industrial applications, Professional applications.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

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**SECTION 8: Exposure controls/personal protection**

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : 8
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

**Solubility** :

Media	Result
water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3	-	92.258	12.3	-

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## SECTION 9: Physical and chemical properties

Relative density : Not available.

Relative vapour density : Not available.

### Particle characteristics

Median particle size : Not applicable.

## 9.2 Other information

### 9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

### 9.2.2 Other safety characteristics

Miscible with water : Yes.

Evaporation rate : Not available.

Physical/chemical properties comments : Not available.

## SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Conclusion/Summary [Product] : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

Conclusion/Summary [Product] : Not available.

#### Serious eye damage/eye irritation

Conclusion/Summary [Product] : Not available.

#### Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

## SECTION 11: Toxicological information

### Respiratory or skin sensitization

#### Skin

**Conclusion/Summary** : Not available.  
**[Product]**

#### Respiratory

**Conclusion/Summary** : Not available.  
**[Product]**

### Germ cell mutagenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Carcinogenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Reproductive toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

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## SECTION 11: Toxicological information

### Potential chronic health effects

- Conclusion/Summary** : Not available.  
**[Product]**
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

- Conclusion/Summary** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.  
**[Product]**

## SECTION 12: Ecological information

### 12.1 Toxicity

- Conclusion/Summary** : Not available.  
**[Product]**

### 12.2 Persistence and degradability

Not available.

- Conclusion/Summary** : Not available.  
**[Product]**

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

- Mobility** : Not available.  
**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

- Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.  
**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

- Conclusion/Summary** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.  
**[Product]**

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

##### Annex XIV

##### Substances of very high concern

None of the components are listed.

##### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

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## SECTION 15: Regulatory information

**Labelling** : Not applicable.

### Other EU regulations

#### Ozone depleting substances (EU 2024/590)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Persistent Organic Pollutants

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

- Abbreviations and acronyms**
- : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available
  - P = Persistent
  - PBT = Persistent, Bioaccumulative and Toxic
  - PMT = Persistent, Mobile and Toxic
  - PNEC = Predicted No Effect Concentration
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - T = Toxic
  - vB = Very Bioaccumulative
  - vM = Very Mobile
  - vP = Very Persistent
  - vPvB = Very Persistent and Very Bioaccumulative
  - vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**

Not applicable.

**Full text of classifications [CLP/GHS]**

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

**Notice to reader**

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# SAFETY DATA SHEET

HS DNA Ligase

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : HS DNA Ligase  
**Part no.** : 5190-7981

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.36 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

EUH430                      ENDOCRINE DISRUPTOR FOR THE ENVIRONMENT                      Category 1

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : Danger

**Hazard statements** : EUH430 - May cause endocrine disruption in the environment.

#### Precautionary statements

**Prevention** : P201 - Obtain special instructions before use.  
P273 - Avoid release to the environment.

**Response** : P391 - Collect spillage.

**Storage** : P405 - Store locked up.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : Not applicable.

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## SECTION 2: Hazards identification

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Product meets the criteria for endocrine disrupting properties according to Regulation (EC) No. 1907/2006.** : Contains Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-. May cause endocrine disruption.

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	-	[2]
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	CAS: 9036-19-5	≤0.3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 ED ENV 1, EUH430 <b>See Section 16 for the full text of the H statements declared above.</b>	ATE [Oral] = 500 mg/kg M [Acute] = 10 M [Chronic] = 1	[1] [3]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance of equivalent concern - Endocrine disrupting properties

Occupational exposure limits, if available, are listed in Section 8.

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**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material may cause endocrine disruption in the environment. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). May be harmful to the environment if released in large quantities. Collect spillage.

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages under controlled conditions.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid breathing vapour or mist. Avoid release to the environment. Avoid contact with eyes, skin and clothing. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
glycerol	<b>NAOSH (Ireland, 4/2024)</b> Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 10 mg/m <sup>3</sup> . Form: mist.

#### Biological exposure indices

No exposure indices known.

#### Recommended monitoring procedures

: Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** :

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
glycerol	-	-	177	-

Ingredient name	°C	Method
glycerol	370	-

- Decomposition temperature** : Not available.
- pH** : 7.5
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Media	Result
water	Soluble

- Partition coefficient: n-octanol/water** : Not applicable.

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3	-	92.258	12.3	-
glycerol	0.000075	0.00001	-	0.0025	0.00033	-

- Relative density** : Not available.
- Relative vapour density** : Not available.

Particle characteristics

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## SECTION 9: Physical and chemical properties

Median particle size : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

#### 9.2.2 Other safety characteristics

Miscible with water : Yes.

Evaporation rate : Not available.

Physical/chemical properties comments : Not available.

## SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Rat - Oral - LD50 2800 mg/kg

Conclusion/Summary [Product] : Not available.

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	500	N/A	N/A	N/A	N/A

#### Skin corrosion/irritation


Conclusion/Summary [Product] : Not available.

#### Serious eye damage/eye irritation

Product/ingredient name	Result

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**SECTION 11: Toxicological information**

 Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 1 %

**Conclusion/Summary** : Not available.  
**[Product]**

**Respiratory corrosion/irritation**

**Conclusion/Summary** : Not available.  
**[Product]**

**Respiratory or skin sensitization****Skin**

**Conclusion/Summary** : Not available.  
**[Product]**

**Respiratory**

**Conclusion/Summary** : Not available.  
**[Product]**

**Germ cell mutagenicity**

**Conclusion/Summary** : Not available.  
**[Product]**

**Carcinogenicity**

**Conclusion/Summary** : Not available.  
**[Product]**

**Reproductive toxicity**

**Conclusion/Summary** : Not available.  
**[Product]**

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

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## SECTION 11: Toxicological information

### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute - LC50 - Fresh water	7200 µg/l [96 hours]
	Acute - EC50 - Fresh water	210 µg/l [96 hours]
	Acute - LC50 - Fresh water	2.518 mg/l [48 hours]

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2.7	78.67	Low

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Product/ingredient name	logK <sub>oc</sub>	K <sub>oc</sub>
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2.5	348.2

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## SECTION 12: Ecological information

### Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	N/A	N/A	Yes	Yes	No	N/A	No

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	No	N/A	No	No	No	N/A	No

#### Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	No	N/A	No	Yes	No	N/A	No

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary** : May cause endocrine disruption. May cause endocrine disruption in the environment.  
**[Product]**

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : Dispose of material(s) and residues under controlled conditions. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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**SECTION 14: Transport information**

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Listed	42	7/3/2017

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
<input checked="" type="checkbox"/> Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Recommended	5th recommendation	2/6/2014

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

Other EU regulations

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

HS DNA Ligase

## SECTION 15: Regulatory information

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

📌 Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate B = Bioaccumulative BCF = Bioconcentration Factor CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization
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**SECTION 16: Other information**

M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
ED ENV 1, EUH430	Calculation method

**Full text of abbreviated H statements**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH430	May cause endocrine disruption in the environment.

**Full text of classifications [CLP/GHS]**

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
ED ENV 1	ENDOCRINE DISRUPTOR FOR THE ENVIRONMENT - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

**Notice to reader**

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# SAFETY DATA SHEET

HS Capture Solution

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : HS Capture Solution  
**Part no.** : 5190-7982

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
5.4 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity:  
1 - 10%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Safety data sheet available on request.

**HS Capture Solution**

**SECTION 2: Hazards identification**

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
disodium dihydrogen ethylenediaminetetraacetate	EC: 205-358-3 CAS: 6381-92-6	≤10	Acute Tox. 4, H332 STOT RE 2, H373 (respiratory tract) (inhalation) <b>See Section 16 for the full text of the H statements declared above.</b>	ATE [Inhalation (vapours)] = 11 mg/l	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

## SECTION 4: First aid measures

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

- Eye contact : No specific data.
- Inhalation : No specific data.
- Skin contact : No specific data.
- Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products : Decomposition products may include the following materials:
  - carbon dioxide
  - carbon monoxide
  - nitrogen oxides
  - halogenated compounds
  - metal oxide/oxides

### 5.3 Advice for firefighters

- Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**HS Capture Solution**

**SECTION 6: Accidental release measures**

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).  
**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

**Recommendations** : Industrial applications, Professional applications.  
**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

No exposure limit value known.

**Biological exposure indices**

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Not available.

**PNECs**

Not available.

**SECTION 8: Exposure controls/personal protection****8.2 Exposure controls**

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties****Appearance**

**Physical state** : Liquid.

**Colour** : Not available.

**Odour** : Not available.

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flammability** : Not applicable.

**Lower and upper explosion limit/flammability limit** : Not available.

**Flash point** : Not applicable.

**Auto-ignition temperature** : Not available.

**HS Capture Solution**

**SECTION 9: Physical and chemical properties**

**Decomposition temperature** : Not available.  
**pH** : 7.5  
**Viscosity** : Dynamic (room temperature): Not available.  
 Kinematic (room temperature): Not available.  
 Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

<b>Vapour pressure</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>			
	<b>Ingredient name</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	water	17.5	2.3	-	92.258	12.3	-

**Relative density** : Not available.

**Relative vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**HS Capture Solution**

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
HS Capture Solution disodium dihydrogen ethylenediaminetetraacetate	N/A 2214.37	N/A N/A	N/A N/A	117.0 11	N/A N/A

Skin corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

Serious eye damage/eye irritation

**Conclusion/Summary** : Not available.  
**[Product]**

Respiratory corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

Respiratory or skin sensitization

**Skin**

**Conclusion/Summary** : Not available.  
**[Product]**

**Respiratory**

**Conclusion/Summary** : Not available.  
**[Product]**

Germ cell mutagenicity

**Conclusion/Summary** : Not available.  
**[Product]**

Carcinogenicity

**Conclusion/Summary** : Not available.  
**[Product]**

Reproductive toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
disodium dihydrogen ethylenediaminetetraacetate	STOT RE 2, H373 (respiratory tract) (inhalation)

## SECTION 11: Toxicological information

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

<b>Product/ingredient name</b>	<b>Result</b>	
disodium dihydrogen ethylenediaminetetraacetate	Chronic - NOEC - Fresh water	25 mg/l [21 days]
<b>Conclusion/Summary [Product]</b>	: Not available.	

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

**HS Capture Solution**

**SECTION 12: Ecological information**

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient**

Product/ingredient name	logKoc	Koc
Disodium dihydrogen ethylenediaminetetraacetate	1.6	37.8169

**Results of PMT and vPvM assessment**

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Disodium dihydrogen ethylenediaminetetraacetate	N/A	N/A	Yes	Yes	N/A	N/A	Yes

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

**12.5 Results of PBT and vPvB assessment**

**Regulation (EC) No. 1907/2006 [REACH]**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Disodium dihydrogen ethylenediaminetetraacetate	N/A	N/A	N/A	Yes	N/A	N/A	N/A

**Regulation (EC) No. 1272/2008 [CLP]**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Disodium dihydrogen ethylenediaminetetraacetate	N/A	N/A	N/A	Yes	N/A	N/A	N/A

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

**12.6 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**HS Capture Solution**

**SECTION 13: Disposal considerations**

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

- 14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- 14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

- Labelling** : Not applicable.

Other EU regulations

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

HS Capture Solution

## SECTION 15: Regulatory information

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate B = Bioaccumulative BCF = Bioconcentration Factor CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization M = Mobile N/A = Not available
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HS Capture Solution

**SECTION 16: Other information**

P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**

H332 H373	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure.
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**Full text of classifications [CLP/GHS]**

Acute Tox. 4 STOT RE 2	ACUTE TOXICITY - Category 4 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
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**Notice to reader**

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# SAFETY DATA SHEET

HS Wash 1 Solution

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : HS Wash 1 Solution  
**Part no.** : 5190-7983

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
13.4 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

HS Wash 1 Solution

## SECTION 2: Hazards identification

### Special packaging requirements

Tactile warning of danger : Not applicable.

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

HS Wash 1 Solution

## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

HS Wash 1 Solution

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

**Recommendations** : Industrial applications, Professional applications.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**HS Wash 1 Solution**

**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
	water	17.5	2.3	-	92.258	12.3	-

**Relative density** : Not available.

**Relative vapour density** : Not available.

Particle characteristics

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

HS Wash 1 Solution

## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### Skin

**Conclusion/Summary [Product]** : Not available.

##### Respiratory

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

HS Wash 1 Solution

## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**HS Wash 1 Solution**

**SECTION 13: Disposal considerations**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
[EU Regulation \(EC\) No. 1907/2006 \(REACH\)](#)

[Annex XIV - List of substances subject to authorisation](#)

[Annex XIV](#)

[Substances of very high concern](#)

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

[Other EU regulations](#)

HS Wash 1 Solution

## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: All components are listed or exempted.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
B = Bioaccumulative  
BCF = Bioconcentration Factor  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

HS Wash 1 Solution

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

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**Disclaimer:** The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

HS Wash 2 Solution

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : HS Wash 2 Solution  
**Part no.** : 5190-7986

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
11 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

HS Wash 2 Solution

## SECTION 2: Hazards identification

### Special packaging requirements

Tactile warning of danger : Not applicable.

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

HS Wash 2 Solution

## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

HS Wash 2 Solution

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**HS Wash 2 Solution**

**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : 8.5
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

<b>Vapour pressure</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>			
	<b>Ingredient name</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	water	17.5	2.3	-	92.258	12.3	-

- Relative density** : Not available.
- Relative vapour density** : Not available.

Particle characteristics

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

HS Wash 2 Solution

## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### **Skin**

**Conclusion/Summary [Product]** : Not available.

##### **Respiratory**

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

HS Wash 2 Solution

## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

HS Wash 2 Solution

## SECTION 13: Disposal considerations

- Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.
- Packaging**
- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

**Other EU regulations**

HS Wash 2 Solution

## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
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HS Wash 2 Solution

**SECTION 16: Other information**

1272/2008]  
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 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
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 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

[Notice to reader](#)

**Disclaimer:** The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

Primer 1

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : Primer 1  
**Part no.** : 5190-7987

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.575 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Primer 1****SECTION 2: Hazards identification****Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

**Primer 1**

**SECTION 5: Firefighting measures**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections**

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Primer 1

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Primer 1**

**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

<b>Vapour pressure</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>			
	<b>Ingredient name</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	water	17.5	2.3	-	92.258	12.3	-

**Relative density** : Not available.

**Relative vapour density** : Not available.

Particle characteristics

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

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## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### **Skin**

**Conclusion/Summary [Product]** : Not available.

##### **Respiratory**

**Conclusion/Summary [Product]** : Not available.

Primer 1

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

Primer 1

## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Primer 1

## SECTION 13: Disposal considerations

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

##### Annex XIV

##### Substances of very high concern

None of the components are listed.

##### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

#### Other EU regulations

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**SECTION 15: Regulatory information**

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE = Acute Toxicity Estimate  
 B = Bioaccumulative  
 BCF = Bioconcentration Factor  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

Primer 1

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

[Notice to reader](#)

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# SAFETY DATA SHEET

Primer 2

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : Primer 2  
**Part no.** : 5190-7988

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
1.15 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Primer 2**

**SECTION 2: Hazards identification**

Special packaging requirements

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed**

Over-exposure signs/symptoms

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

**Primer 2**

**SECTION 5: Firefighting measures**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections**

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Primer 2**

**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

<b>Vapour pressure</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>			
	<b>Ingredient name</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	water	17.5	2.3	-	92.258	12.3	-

- Relative density** : Not available.
- Relative vapour density** : Not available.

Particle characteristics

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

Primer 2

## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### **Skin**

**Conclusion/Summary [Product]** : Not available.

##### **Respiratory**

**Conclusion/Summary [Product]** : Not available.

**Primer 2**

**SECTION 11: Toxicological information**

Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Primer 2

## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Primer 2

**SECTION 13: Disposal considerations**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

**Other EU regulations**

**Primer 2**

**SECTION 15: Regulatory information**

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE = Acute Toxicity Estimate  
 B = Bioaccumulative  
 BCF = Bioconcentration Factor  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

[Notice to reader](#)

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# SAFETY DATA SHEET

HS Elution Buffer

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : HS Elution Buffer  
**Part no.** : 5190-7989

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
30 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

HS Elution Buffer

## SECTION 2: Hazards identification

### Special packaging requirements

Tactile warning of danger : Not applicable.

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

HS Elution Buffer

## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

HS Elution Buffer

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**HS Elution Buffer**

**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : 8.5
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
	water	17.5	2.3	-	92.258	12.3	-

**Relative density** : Not available.

**Relative vapour density** : Not available.

Particle characteristics

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

HS Elution Buffer

## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### Skin

**Conclusion/Summary [Product]** : Not available.

##### Respiratory

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

HS Elution Buffer

## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product

**HS Elution Buffer**

**SECTION 13: Disposal considerations**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

Other EU regulations

HS Elution Buffer

## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
B = Bioaccumulative  
BCF = Bioconcentration Factor  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

HS Elution Buffer

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

[Notice to reader](#)

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# SAFETY DATA SHEET

Herculase II Fusion DNA Polymerase

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Herculase II Fusion DNA Polymerase  
**Part no.** : 5190-7990

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.575 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Herculase II Fusion DNA Polymerase**

**SECTION 2: Hazards identification**

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.  <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed**

Over-exposure signs/symptoms

**Herculase II Fusion DNA Polymerase**

**SECTION 4: First aid measures**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

*Herculase II Fusion DNA Polymerase*

**SECTION 6: Accidental release measures**

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
 See Section 8 for information on appropriate personal protective equipment.  
 See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).  
**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

**Recommendations** : Industrial applications, Professional applications.  
**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Occupational exposure limits

Product/ingredient name	Exposure limit values
glycerol	<b>NAOSH (Ireland, 4/2024)</b> Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 10 mg/m <sup>3</sup> . Form: mist.

Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Not available.

PNECs

Not available.

**8.2 Exposure controls**

**Herculase II Fusion DNA Polymerase**

**SECTION 8: Exposure controls/personal protection**

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

**Appearance**

**Physical state** : Liquid.

**Colour** : Not available.

**Odour** : Not available.

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flammability** : Not applicable.

**Lower and upper explosion limit/flammability limit** : Not available.

<b>Flash point</b>	<b>Closed cup</b>		<b>Open cup</b>	
	<b>°C</b>	<b>Method</b>	<b>°C</b>	<b>Method</b>
glycerol	-	-	177	-

**Auto-ignition temperature** :

**Herculase II Fusion DNA Polymerase**

**SECTION 9: Physical and chemical properties**

Ingredient name	°C	Method
glycerol	370	-

**Decomposition temperature** : Not available.  
**pH** : 8.2  
**Viscosity** : Dynamic (room temperature): Not available.  
 Kinematic (room temperature): Not available.  
 Kinematic (40°C): Not available.

Solubility	Media	Result
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	water	17.5	2.3	-	92.258	12.3	-
	glycerol	0.000075	0.00001	-	0.0025	0.00033	-

**Relative density** : Not available.  
**Relative vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.  
**Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

**Miscible with water** : Yes.  
**Evaporation rate** : Not available.  
**Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

#### **Acute toxicity estimates**

N/A

#### Skin corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

#### Serious eye damage/eye irritation

**Conclusion/Summary** : Not available.  
**[Product]**

#### Respiratory corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

#### Respiratory or skin sensitization

##### **Skin**

**Conclusion/Summary** : Not available.  
**[Product]**

##### **Respiratory**

**Conclusion/Summary** : Not available.  
**[Product]**

#### Germ cell mutagenicity

**Conclusion/Summary** : Not available.  
**[Product]**

#### Carcinogenicity

**Conclusion/Summary** : Not available.  
**[Product]**

#### Reproductive toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

#### Potential acute health effects

## SECTION 11: Toxicological information

- Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.  
**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

- Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

- Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

- Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

**Herculase II Fusion DNA Polymerase**

**SECTION 12: Ecological information**

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

**12.5 Results of PBT and vPvB assessment**

**Regulation (EC) No. 1907/2006 [REACH]**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

**12.6 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-

*Herculase II Fusion DNA Polymerase*

**SECTION 14: Transport information**

<b>14.5 Environmental hazards</b>	No.	No.	No.
-----------------------------------	-----	-----	-----

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

Other EU regulations

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

**Australia** : Not determined.

**Canada** : Not determined.

**China** : Not determined.

**Herculase II Fusion DNA Polymerase**

**SECTION 15: Regulatory information**

- Eurasian Economic Union** : **Russian Federation inventory:** All components are listed or exempted.
- Japan** : **Japan inventory (CSCL):** Not determined.  
**Japan inventory (ISHL):** Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : Not determined.
- Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** :
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available
  - P = Persistent
  - PBT = Persistent, Bioaccumulative and Toxic
  - PMT = Persistent, Mobile and Toxic
  - PNEC = Predicted No Effect Concentration
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - T = Toxic
  - vB = Very Bioaccumulative
  - vM = Very Mobile
  - vP = Very Persistent
  - vPvB = Very Persistent and Very Bioaccumulative
  - vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**

Not applicable.

**Full text of classifications [CLP/GHS]**

*Herculase II Fusion DNA Polymerase*

## SECTION 16: Other information

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

### Notice to reader

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# SAFETY DATA SHEET

Herculase II Reaction Buffer

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Herculase II Reaction Buffer  
**Part no.** : 5190-7991

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
4.3 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%  
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Safety data sheet available on request.

**Herculase II Reaction Buffer****SECTION 2: Hazards identification**

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
trometamol	EC: 201-064-4 CAS: 77-86-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

**Herculase II Reaction Buffer**

**SECTION 4: First aid measures**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen oxides  
 sulfur oxides  
 metal oxide/oxides

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

**Herculase II Reaction Buffer**

**SECTION 6: Accidental release measures**

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).  
**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

**Recommendations** : Industrial applications, Professional applications.  
**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

No exposure limit value known.

**Biological exposure indices**

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Product/ingredient name	Result	
trometamol	DNEL - General population - Long term - Oral	8.3 mg/kg bw/day
	DNEL - General population - Long term - Inhalation	29 mg/m <sup>3</sup>
	DNEL - General population - Long term - Dermal	83.3 mg/kg bw/day
	DNEL - Workers - Long term - Inhalation	117.5 mg/m <sup>3</sup>
	DNEL - Workers - Long term - Dermal	166.7 mg/kg bw/day

**SECTION 8: Exposure controls/personal protection****PNECs**

Not available.

**8.2 Exposure controls**

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties****Appearance**

**Physical state** : Liquid.

**Colour** : Not available.

**Odour** : Not available.

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flammability** : Not applicable.

**Lower and upper explosion limit/flammability limit** : Not available.

**Herculase II Reaction Buffer**

**SECTION 9: Physical and chemical properties**

- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : 10
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Vapour pressure** : 2.3 kPa (17.5 mm Hg) [Based on solvent.]
- Relative density** : Not available.
- Relative vapour density** : Not available.
- Particle characteristics**
- Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

- Explosive properties** : Not available.
- Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

- Miscible with water** : Yes.
- Evaporation rate** : Not available.
- Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : No specific data.
- 10.5 Incompatible materials** : May react or be incompatible with oxidising materials.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Herculase II Reaction Buffer**

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute toxicity

<b>Product/ingredient name</b>	<b>Result</b>	
trometamol	Rat - Male, Female - Dermal - LD50	>5000 mg/kg
<b>Conclusion/Summary [Product]</b>	: Not available.	

**Acute toxicity estimates**  
N/A

Skin corrosion/irritation

<b>Product/ingredient name</b>	<b>Result</b>	
trometamol	Rabbit - Skin - Moderate irritant	Amount/concentration applied: 25 % Amount/concentration applied: 500 mg
	Rabbit - Skin - Severe irritant	
<b>Conclusion/Summary [Product]</b>	: Not available.	

Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

Respiratory or skin sensitization

**Skin**  
**Conclusion/Summary [Product]** : Not available.

**Respiratory**  
**Conclusion/Summary [Product]** : Not available.

Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

**Herculase II Reaction Buffer**

**SECTION 11: Toxicological information**

Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

**11.2 Information on other hazards**

**11.2.1 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**SECTION 12: Ecological information**

**12.1 Toxicity**

<b>Product/ingredient name</b>	<b>Result</b>	
trometamol	Acute - EC50 - Fresh water	>980 mg/l [48 hours]
	Acute - NOEC - Fresh water	520 mg/l [48 hours]
<b>Conclusion/Summary [Product]</b>	: Not available.	

**12.2 Persistence and degradability**

<b>Product/ingredient name</b>	<b>Result</b>		
trometamol	Aerobic - 30 mg/l	97.1% [28 days] - Readily	Aerobic - 30 mg/l

**Herculase II Reaction Buffer****SECTION 12: Ecological information**

**Conclusion/Summary [Product]** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
trometamol	-	-	Readily

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil****Soil/water partition coefficient**

Product/ingredient name	logKoc	Koc
trometamol	0.61	4.06623

**Results of PMT and vPvM assessment**

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
trometamol	No	N/A	Yes	No	N/A	N/A	Yes

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

**12.5 Results of PBT and vPvB assessment****Regulation (EC) No. 1907/2006 [REACH]**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
trometamol	No	N/A	N/A	No	N/A	N/A	N/A

**Regulation (EC) No. 1272/2008 [CLP]**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
trometamol	No	N/A	N/A	No	N/A	N/A	N/A

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

**12.6 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Herculase II Reaction Buffer**

**SECTION 13: Disposal considerations**

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

Other EU regulations

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

**Herculase II Reaction Buffer**

**SECTION 15: Regulatory information**

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory**: All components are listed or exempted.
- Japan** : **Japan inventory (CSCL)**: All components are listed or exempted.  
**Japan inventory (ISHL)**: All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- Thailand** : All components are listed or exempted.
- Turkey** : Not determined.
- United States** : All components are active or exempted.
- Viet Nam** : All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** :
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available

**Herculase II Reaction Buffer**

**SECTION 16: Other information**

P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

<b>Classification</b>	<b>Justification</b>
Not classified.	

**Full text of abbreviated H statements**

H315 H319	Causes skin irritation. Causes serious eye irritation.
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**Full text of classifications [CLP/GHS]**

Eye Irrit. 2 Skin Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2
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**Version** : 1.1

**Notice to reader**

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# SAFETY DATA SHEET

100 mM dNTP Mix

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : 100 mM dNTP Mix  
**Part no.** : 5190-7992

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.115 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%  
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%  
Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%

**Ingredients of unknown ecotoxicity** : Contains 5.4% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

100 mM dNTP Mix

**SECTION 2: Hazards identification**

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

100 mM dNTP Mix

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

100 mM dNTP Mix

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

100 mM dNTP Mix

## SECTION 8: Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : 7.5
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b> :	<b>Media</b>	<b>Result</b>
	water	Soluble

- Partition coefficient: n-octanol/water** : Not applicable.

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## SECTION 9: Physical and chemical properties

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	water	17.5	2.3	-	92.258	12.3	-

Relative density : Not available.  
 Relative vapour density : Not available.  
Particle characteristics  
 Median particle size : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.  
 Oxidising properties : Not available.

#### 9.2.2 Other safety characteristics

Miscible with water : Yes.  
 Evaporation rate : Not available.  
 Physical/chemical properties comments : Not available.

## SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates  
 N/A

#### Skin corrosion/irritation

Conclusion/Summary [Product] : Not available.

#### Serious eye damage/eye irritation

Conclusion/Summary [Product] : Not available.

100 mM dNTP Mix

## SECTION 11: Toxicological information

### Respiratory corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

### Respiratory or skin sensitization

#### **Skin**

**Conclusion/Summary** : Not available.  
**[Product]**

#### **Respiratory**

**Conclusion/Summary** : Not available.  
**[Product]**

### Germ cell mutagenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Carcinogenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Reproductive toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

100 mM dNTP Mix

## SECTION 11: Toxicological information

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

100 mM dNTP Mix

## SECTION 12: Ecological information

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

100 mM dNTP Mix

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

###### Substances of very high concern

None of the components are listed.

##### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

#### Other EU regulations

##### Ozone depleting substances (EU 2024/590)

Not listed.

##### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

##### Persistent Organic Pollutants

Not listed.

##### Seveso Directive

This product is not controlled under the Seveso Directive.

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol

Not listed.

##### Stockholm Convention on Persistent Organic Pollutants

Not listed.

##### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

##### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

#### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

100 mM dNTP Mix

## SECTION 15: Regulatory information

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- B = Bioaccumulative
- BCF = Bioconcentration Factor
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- IATA = International Air Transport Association
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- M = Mobile
- N/A = Not available
- P = Persistent
- PBT = Persistent, Bioaccumulative and Toxic
- PMT = Persistent, Mobile and Toxic
- PNEC = Predicted No Effect Concentration
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- RRN = REACH Registration Number
- SGG = Segregation Group
- T = Toxic
- vB = Very Bioaccumulative
- vM = Very Mobile
- vP = Very Persistent
- vPvB = Very Persistent and Very Bioaccumulative
- vPvM = Very Persistent and Very Mobile

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

### Full text of abbreviated H statements

Not applicable.

### Full text of classifications [CLP/GHS]

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

### Notice to reader

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# SAFETY DATA SHEET

HaloPlex HS ILM Indexing Plate

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : HaloPlex HS ILM Indexing Plate  
**Part no.** : 5190-9461

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.0075 ml  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

HaloPlex HS ILM Indexing Plate

## SECTION 2: Hazards identification

### Special packaging requirements

Tactile warning of danger : Not applicable.

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**HaloPlex HS ILM Indexing Plate**

**SECTION 8: Exposure controls/personal protection**

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

<b>Vapour pressure</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>			
	<b>Ingredient name</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	water	17.5	2.3	-	92.258	12.3	-

**Relative density** : Not available.

**Relative vapour density** : Not available.

Particle characteristics

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

HaloPlex HS ILM Indexing Plate

## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### **Skin**

**Conclusion/Summary [Product]** : Not available.

##### **Respiratory**

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Carcinogenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Reproductive toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary** : Not available.  
**[Product]**  
**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.

HaloPlex HS ILM Indexing Plate

## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**HaloPlex HS ILM Indexing Plate**

**SECTION 13: Disposal considerations**

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

Other EU regulations

## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
B = Bioaccumulative  
BCF = Bioconcentration Factor  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

HaloPlex HS ILM Indexing Plate

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 23/05/2025

**Version** : 1.1

[Notice to reader](#)

**Disclaimer:** The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

Enzyme Strip 1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Enzyme Strip 1  
**Part no.** : 5190-5357

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** :  Analytical reagent.  
0.05 ml/well  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Enzyme Strip 1**

**SECTION 2: Hazards identification**

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.  <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed**

Over-exposure signs/symptoms

**Enzyme Strip 1**

**SECTION 4: First aid measures**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Enzyme Strip 1

## SECTION 6: Accidental release measures

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).  
**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** : Industrial applications, Professional applications.  
**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
glycerol	<b>NAOSH (Ireland, 4/2024)</b> Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 10 mg/m <sup>3</sup> . Form: mist.

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

**Enzyme Strip 1**

**SECTION 8: Exposure controls/personal protection**

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

**Appearance**

**Physical state** : Liquid.

**Colour** : Not available.

**Odour** : Not available.

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flammability** : Not applicable.

**Lower and upper explosion limit/flammability limit** : Not available.

<b>Flash point</b>	<b>Closed cup</b>		<b>Open cup</b>	
	<b>°C</b>	<b>Method</b>	<b>°C</b>	<b>Method</b>
glycerol	-	-	177	-

**Auto-ignition temperature** : 370°C

**Enzyme Strip 1**

**SECTION 9: Physical and chemical properties**

**Decomposition temperature** : Not available.  
**pH** : 7.4  
**Viscosity** : Dynamic (room temperature): Not available.  
 Kinematic (room temperature): Not available.  
 Kinematic (40°C): Not available.

<b>Solubility</b> :	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

**Vapour pressure** : <0.13 kPa (<1 mm Hg)

**Relative density** : Not available.

**Relative vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information**

**9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.  
 Reactive or incompatible with the following materials: reducing materials and alkalis.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

**Conclusion/Summary [Product]** : Not available.

**Acute toxicity estimates**

N/A

Enzyme Strip 1

## SECTION 11: Toxicological information

### Skin corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

### Serious eye damage/eye irritation

**Conclusion/Summary** : Not available.  
**[Product]**

### Respiratory corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

### Respiratory or skin sensitization

#### **Skin**

**Conclusion/Summary** : Not available.  
**[Product]**

#### **Respiratory**

**Conclusion/Summary** : Not available.  
**[Product]**

### Germ cell mutagenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Carcinogenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Reproductive toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Enzyme Strip 1**

**SECTION 11: Toxicological information**

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**11.2 Information on other hazards**

**11.2.1 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Conclusion/Summary [Product]** : Not available.

**12.2 Persistence and degradability**

Not available.

**Conclusion/Summary [Product]** : Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient**

Not available.

**Results of PMT and vPvM assessment**

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

**12.5 Results of PBT and vPvB assessment**

**Regulation (EC) No. 1907/2006 [REACH]**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

**Enzyme Strip 1**

**SECTION 12: Ecological information**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.  
**Regulation (EC) No. 1272/2008 [CLP]**

**12.6 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Product

**Methods of disposal** :  Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Enzyme Strip 1

## SECTION 14: Transport information

14.7 Transport in bulk according to IMO instruments : Not available.

## SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

Labelling : Not applicable.

Other EU regulations

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.

**Enzyme Strip 1**

**SECTION 15: Regulatory information**

- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are active or exempted.
- Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** :
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available
  - P = Persistent
  - PBT = Persistent, Bioaccumulative and Toxic
  - PMT = Persistent, Mobile and Toxic
  - PNEC = Predicted No Effect Concentration
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - T = Toxic
  - vB = Very Bioaccumulative
  - vM = Very Mobile
  - vP = Very Persistent
  - vPvB = Very Persistent and Very Bioaccumulative
  - vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**

Not applicable.

**Full text of classifications [CLP/GHS]**

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 29/04/2025

**Version** : 1.1

**Notice to reader**

*Enzyme Strip 1*

## **SECTION 16: Other information**

**Disclaimer:** The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

Enzyme Strip 2

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Enzyme Strip 2  
**Part no.** : 5190-5358

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** :  Analytical reagent.  
0.05 ml/well  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30 - 60%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Enzyme Strip 2****SECTION 2: Hazards identification**

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.  <b>See Section 16 for the full text of the H statements declared above.</b>	-	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

**Enzyme Strip 2**

**SECTION 4: First aid measures**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**5.3 Advice for firefighters**

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Enzyme Strip 2

## SECTION 6: Accidental release measures

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).  
**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** : Industrial applications, Professional applications.  
**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
glycerol	<b>NAOSH (Ireland, 4/2024)</b> Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 10 mg/m <sup>3</sup> . Form: mist.

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

**Enzyme Strip 2**

**SECTION 8: Exposure controls/personal protection**

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

**Appearance**

**Physical state** : Liquid.

**Colour** : Not available.

**Odour** : Not available.

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flammability** : Not applicable.

**Lower and upper explosion limit/flammability limit** : Not available.

<b>Flash point</b>	<b>Closed cup</b>		<b>Open cup</b>	
	<b>°C</b>	<b>Method</b>	<b>°C</b>	<b>Method</b>
glycerol	-	-	177	-

**Auto-ignition temperature** : 370°C

**Enzyme Strip 2****SECTION 9: Physical and chemical properties**

**Decomposition temperature** : Not available.

**pH** : 7.4

**Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

<b>Solubility</b>	<b>Media</b>	<b>Result</b>
	water	Soluble

**Partition coefficient: n-octanol/water** : Not applicable.

**Vapour pressure** : <0.13 kPa (<1 mm Hg)

**Relative density** : Not available.

**Relative vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information****9.2.1 Information with regard to physical hazard classes**

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

**9.2.2 Other safety characteristics**

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.  
Reactive or incompatible with the following materials: reducing materials and alkalis.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

**Conclusion/Summary [Product]** : Not available.

**Acute toxicity estimates**

N/A

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## SECTION 11: Toxicological information

### Skin corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

### Serious eye damage/eye irritation

**Conclusion/Summary** : Not available.  
**[Product]**

### Respiratory corrosion/irritation

**Conclusion/Summary** : Not available.  
**[Product]**

### Respiratory or skin sensitization

#### **Skin**

**Conclusion/Summary** : Not available.  
**[Product]**

#### **Respiratory**

**Conclusion/Summary** : Not available.  
**[Product]**

### Germ cell mutagenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Carcinogenicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Reproductive toxicity

**Conclusion/Summary** : Not available.  
**[Product]**

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

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**SECTION 11: Toxicological information**

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**11.2 Information on other hazards**

**11.2.1 Endocrine disrupting properties**

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Conclusion/Summary [Product]** : Not available.

**12.2 Persistence and degradability**

Not available.

**Conclusion/Summary [Product]** : Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient**

Not available.

**Results of PMT and vPvM assessment**

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

**12.5 Results of PBT and vPvB assessment**

**Regulation (EC) No. 1907/2006 [REACH]**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

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**SECTION 12: Ecological information**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.  
**Regulation (EC) No.**  
 1272/2008 [CLP]

**12.6 Endocrine disrupting properties**

**Conclusion/Summary** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.  
**[Product]**

**12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Product

**Methods of disposal** :  Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	ADR/RID	IMDG	IATA
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-
<b>14.4 Packing group</b>	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Enzyme Strip 2

## SECTION 14: Transport information

14.7 Transport in bulk according to IMO instruments : Not available.

## SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

Labelling : Not applicable.

Other EU regulations

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.

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**SECTION 15: Regulatory information**

- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are active or exempted.
- Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** :
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - B = Bioaccumulative
  - BCF = Bioconcentration Factor
  - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
  - DMEL = Derived Minimal Effect Level
  - DNEL = Derived No Effect Level
  - EUH statement = CLP-specific Hazard statement
  - IATA = International Air Transport Association
  - IMDG = International Maritime Dangerous Goods
  - IMO = International Maritime Organization
  - M = Mobile
  - N/A = Not available
  - P = Persistent
  - PBT = Persistent, Bioaccumulative and Toxic
  - PMT = Persistent, Mobile and Toxic
  - PNEC = Predicted No Effect Concentration
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - T = Toxic
  - vB = Very Bioaccumulative
  - vM = Very Mobile
  - vP = Very Persistent
  - vPvB = Very Persistent and Very Bioaccumulative
  - vPvM = Very Persistent and Very Mobile

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**

Not applicable.

**Full text of classifications [CLP/GHS]**

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : 29/04/2025

**Version** : 1.1

**Notice to reader**

*Enzyme Strip 2*

## **SECTION 16: Other information**

**Disclaimer:** The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

# SAFETY DATA SHEET

HaloPlex HS Probe ILM

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : HaloPlex HS Probe ILM  
**Part no.** : 5190-7846/5190-7848

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.714 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

HaloPlex HS Probe ILM

## SECTION 2: Hazards identification

### Special packaging requirements

Tactile warning of danger : Not applicable.

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

HaloPlex HS Probe ILM

## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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## SECTION 8: Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	

- Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
		water	17.5	2.3	-	92.258	12.3

- Relative density** : Not available.
- Relative vapour density** : Not available.

#### Particle characteristics

- Median particle size** : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

- Explosive properties** : Not available.

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## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### Skin

**Conclusion/Summary [Product]** : Not available.

##### Respiratory

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.  
**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

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### SECTION 13: Disposal considerations

- Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.
- Packaging**
- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

### SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

### SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

Other EU regulations

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## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

📌 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
B = Bioaccumulative  
BCF = Bioconcentration Factor  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

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**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025  
**Date of previous issue** : No previous validation  
**Version** : 1

[Notice to reader](#)

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# SAFETY DATA SHEET

HaloPlex HS Probe ILM

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : HaloPlex HS Probe ILM  
**Part no.** : 5190-7850/5190-7852

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.714 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

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## SECTION 2: Hazards identification

### Special packaging requirements

Tactile warning of danger : Not applicable.

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

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## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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## SECTION 8: Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	

- Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
		water	17.5	2.3	-	92.258	12.3

- Relative density** : Not available.
- Relative vapour density** : Not available.

#### Particle characteristics

- Median particle size** : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

- Explosive properties** : Not available.

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## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### Skin

**Conclusion/Summary [Product]** : Not available.

##### Respiratory

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

HaloPlex HS Probe ILM

## SECTION 13: Disposal considerations

**Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

##### Annex XIV

##### Substances of very high concern

None of the components are listed.

##### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

##### Other EU regulations

HaloPlex HS Probe ILM

## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
B = Bioaccumulative  
BCF = Bioconcentration Factor  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

HaloPlex HS Probe ILM

**SECTION 16: Other information**

1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 IATA = International Air Transport Association  
 IMDG = International Maritime Dangerous Goods  
 IMO = International Maritime Organization  
 M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

**Date of issue/ Date of revision** : 27/11/2025

**Date of previous issue** : No previous validation

**Version** : 1

[Notice to reader](#)

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# SAFETY DATA SHEET

HaloPlex HS Probe ILM

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

**Product name** : HaloPlex HS Probe ILM  
**Part no.** : 5190-7854/5190-7856

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Analytical reagent.  
0.714 ml (96 reactions)  
**Uses advised against** : None known.

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +353 1 901 4670

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

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## SECTION 2: Hazards identification

### Special packaging requirements

Tactile warning of danger : Not applicable.

### 2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

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## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : No specific data.

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Not available.

#### PNECs

Not available.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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## SECTION 8: Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C
- Boiling point or initial boiling point and boiling range** : 100°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	

- Partition coefficient: n-octanol/water** : Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
		water	17.5	2.3	-	92.258	12.3

- Relative density** : Not available.
- Relative vapour density** : Not available.

#### Particle characteristics

- Median particle size** : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

- Explosive properties** : Not available.

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## SECTION 9: Physical and chemical properties

**Oxidising properties** : Not available.

### 9.2.2 Other safety characteristics

**Miscible with water** : Yes.

**Evaporation rate** : Not available.

**Physical/chemical properties comments** : Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidising materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary [Product]** : Not available.

#### Acute toxicity estimates

N/A

#### Skin corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Serious eye damage/eye irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory corrosion/irritation

**Conclusion/Summary [Product]** : Not available.

#### Respiratory or skin sensitization

##### Skin

**Conclusion/Summary [Product]** : Not available.

##### Respiratory

**Conclusion/Summary [Product]** : Not available.

## SECTION 11: Toxicological information

### Germ cell mutagenicity

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**Conclusion/Summary [Product]** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

HaloPlex HS Probe ILM

## SECTION 11: Toxicological information

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Not available.

#### Results of PMT and vPvM assessment

This mixture does not contain any substances that are assessed to be a PMT or a vPvM.

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

**Regulation (EC) No. 1272/2008 [CLP]**

### 12.6 Endocrine disrupting properties

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

HaloPlex HS Probe ILM

### SECTION 13: Disposal considerations

- Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.
- Packaging**
- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
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### SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

- 14.6 Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- 14.7 Transport in bulk according to IMO instruments** : Not available.

### SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

None of the components are listed / The components are not impacted by a restriction

**Labelling** : Not applicable.

**Other EU regulations**

HaloPlex HS Probe ILM

## SECTION 15: Regulatory information

### Ozone depleting substances (EU 2024/590)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is not controlled under the Seveso Directive.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

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Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

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<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: All components are listed or exempted.
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<b>Viet Nam</b>	: Not determined.

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HaloPlex HS Probe ILM

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 T = Toxic  
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 vM = Very Mobile  
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[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Not classified.	

[Full text of abbreviated H statements](#)

Not applicable.

[Full text of classifications \[CLP/GHS\]](#)

Not applicable.

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**Date of previous issue** : No previous validation  
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