

SAFETY DATA SHEET

DAB Substrate Buffer

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

1.1 Product identifier

Product name : DAB Substrate Buffer
Part no. : GE001, GV800, GV823, GV825, GV900, GV925, K0620, K1492, K1494, K3467, K3468, K3954, K4065, K4071, K5007, K5204, K5207, K5361, K8000, K8002, K8023, SK001, SK005, SK006, SK050, SK110, SK310

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

Identified uses : Laboratory use
Container type: vials
GE001 // EnVision FLEX Substrate Buffer (Dako Omnis) // HercepTest mAb pharmDx // 2 x 26 mL
GV800 // EnVision FLEX Substrate Buffer (Dako Omnis) // EnVision FLEX, High pH (Dako Omnis) // 16x26 mL
GV823 // EnVision FLEX Substrate Buffer (Dako Omnis) // EnVision FLEX Mini Kit, High pH (Dako Omnis) // 4x26 mL
GV825 // EnVision FLEX Substrate Buffer (Dako Omnis) // EnVision FLEX DAB+ Substrate Chromogen System // 4x26 mL
GV900 // EnVision FLEX Substrate Buffer (Dako Omnis) // EnVision FLEX HRP Magenta, High pH (Dako Omnis) // 3x26 mL
GV925 // EnVision FLEX Substrate Buffer (Dako Omnis) // EnVision FLEX HRP Magenta Substrate Chromogen System (Dako Omnis) // 1x26 mL
K0620 // DAB Substrate Buffer // GenPoint Tyramide Signal Amplification System for Biotinylated Probes // 10 mL
K1492 // DAB+ Substrate Buffer // EGFR pharmDx // 1x10 mL
K1494 // DAB+ Substrate Buffer // EGFR pharmDx // 10x11 mL
K3467 // DAB+ Substrate Buffer // Dako Liquid DAB+ Substrate Chromogen System // 1x15 mL
K3468 // DAB+ Substrate Buffer // Dako Liquid DAB+ Substrate Chromogen System // 1x110 mL
K3954 // DAB+ Substrate Buffer // Dako ARK (Animal Research Kit), Peroxidase for Mouse Primary Antibodies // 1x18 mL
K4065 // DAB+ Substrate Buffer // Dako EnVision+ Dual Link System-HRP (DAB+) // 1x18 mL
K4071 // ER/PR pharmDx DAB+ Substrate Buffer // Dako ER/PR pharmDx Kit For the Dako Autostainer // 10x11 mL
K5007 // Dako REAL Substrate Buffer // Dako REAL EnVision Detection System, Peroxidase/DAB+, Rabbit/Mouse // 1x250 mL
K5204 // DAB Buffered Substrate // HercepTestTM // 1x10 mL
K5207 // DAB Buffered Substrate // HercepTestfor the Dako Autostainer // 15x11 mL
K5361 // DAB+ Substrate Buffer // EnVision G|2 Doublestain System, Rabbit/Mouse (DAB+/Permanent Red) // 3x11 mL
K8000 // EnVision FLEX Substrate Buffer // EnVision FLEX, High pH, (Link) // 12x20 mL
K8002 // EnVision FLEX Substrate Buffer // EnVision FLEX+, Mouse, High pH, (Link) // 12x20 mL
K8023 // EnVision FLEX Substrate Buffer // EnVision FLEX Mini Kit, High pH, (Link) // 5x20 mL
SK001 // HercepTest DAB Substrate Buffer // HercepTest for Automated Link Platforms // 2x22 mL
SK005 // DAB+ Substrate Buffer // PD-L1 IHC 28-8 pharmDx // 15x7.2 mL
SK006 // DAB+ Substrate Buffer // PD-L1 IHC 22C3 pharmDx // 15x7.2 mL
SK050 // DAB Substrate Buffer // Her2Low // 15x7.2 mL
SK110 // EnVision DuoFLEX DAB+ Substrate Buffer // EnVision DuoFLEX Doublestain System, (Link) // 2x36 mL
SK310 // ER/PR pharmDx DAB+ Substrate Buffer // Dako ER/PR pharmDx Kit (Link) // 2x50 mL
Reference number: SDS342

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

Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
Tel: +1 800 227 9770

Agilent Technologies Singapore (International) Pte Ltd.
No. 1 Yishun Avenue 7
Singapore, 768923
Tel. (65) 6276 2622

Agilent Technologies Denmark ApS
Produktionsvej 42
2600 Glostrup,
Denmark
Tel. +45 44 85 95 00

www.Agilent.com

e-mail address of person responsible for this SDS : sds@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

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]

H360D REPRODUCTIVE TOXICITY Category 1B

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 : H360D - May damage the unborn child.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.

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

Storage : Not applicable.

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SECTION 2: Hazards identification

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : - imidazole

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 : Contains one or more substances considered to have endocrine-disrupting properties.

Substances identified as having endocrine disruptor properties :

Ingredient name	Impact
<input checked="" type="checkbox"/> Nonylphenol, ethoxylated	Environment

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
<input checked="" type="checkbox"/> Imidazole	EC: 206-019-2 CAS: 288-32-4 Index: 613-319-00-0	<1	Acute Tox. 4, H302 Skin Corr. 1C, H314 Repr. 1B, H360D	ATE [Oral] = 500 mg/kg	[1]
Nonylphenol, ethoxylated	EC: 500-024-6 CAS: 9016-45-9	≤0.12	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1] [2]
Quaternary ammonium compounds, alkylbenzyl dimethyl, chlorides	CAS: 8001-54-5	≤0.012	Acute Tox. 3, H301 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 240 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l M [Acute] = 10 M [Chronic] = 10	[1]

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SECTION 3: Composition/information on ingredients

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 of equivalent concern

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 if irritation occurs.
- 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.
- 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

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.

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

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SECTION 4: First aid measures

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 : 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 : 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. 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. May be harmful to the environment if released. Dispose of spillages under controlled conditions.

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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). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. 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 : Specific storage conditions: Please consult the label.
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

No exposure limit value known.

Biological exposure indices

None 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

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SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
imidazole	DNEL	Long term Dermal	1.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	10.6 mg/m ³	Workers	Systemic

PNECs

No PNECs 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.

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.

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SECTION 9: Physical and chemical properties

Melting point/freezing point : 0°C
Initial boiling point and boiling range : 100°C
Flammability : Not applicable.
Upper/lower flammability or explosive limits : Not available.
Flash point : Not available.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
pH : 7.5
Viscosity : Not available.

Media	Result
Water	Soluble

Miscible with water : Yes.
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	23.8	3.2		92.258	12.3	

Evaporation rate : Not available.
Relative density : Not available.
Vapour density : Not available.
Explosive properties : Not available.
Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

No additional information.

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.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
imidazole Quaternary ammonium compounds, alkylbenzyl dimethyl, chlorides	LD50 Oral	Rat	220 mg/kg	-
	LD50 Oral	Rat	240 mg/kg	-

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)
imidazole	500	N/A	N/A	N/A	N/A
Nonylphenol, ethoxylated	4000	5010	N/A	N/A	N/A
Quaternary ammonium compounds, alkylbenzyl dimethyl, chlorides	240	1100	N/A	11	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
imidazole	Eyes - Moderate irritant	Rabbit	-	168 hours	-
	Eyes - Severe irritant	Guinea pig	-	105 mg	-
Nonylphenol, ethoxylated	Eyes - Severe irritant	Mouse	-	20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
Quaternary ammonium compounds, alkylbenzyl dimethyl, chlorides	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Rabbit	-	10 mg	-
	Eyes - Severe irritant	Human	-	50 ug	-
	Eyes - Severe irritant	Monkey	-	24 hours 2 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 1 mg	-
	Skin - Mild irritant	Human	-	72 hours 150 ug l	-
	Skin - Mild irritant	Human	-	24 hours 3 %	-
	Skin - Moderate irritant	Human	-	48 hours 1 %	-
Skin - Moderate irritant	Rabbit	-	24 hours 50 mg	-	
Skin - Moderate irritant	Woman	-	0.1 %	-	

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

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SECTION 11: Toxicological information

Not available.

Aspiration hazard

Not available.

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

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : 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

Skin contact : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eye contact : 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

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 : May damage the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

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SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Nonylphenol, ethoxylated Quaternary ammonium compounds, alkylbenzyl dimethyl, chlorides	Acute LC50 1.23 mg/l Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 0.148 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1300 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 35 µg/l Fresh water	Fish - Oryzias latipes - Fry	100 days
	Acute EC50 56 µg/l Fresh water	Algae - Chlorella pyrenoidosa - Exponential growth phase	72 hours
	Acute EC50 56 µg/l Fresh water	Algae - Chlorella pyrenoidosa - Exponential growth phase	96 hours
	Acute EC50 18 µg/l Fresh water Acute EC50 750 µg/l Fresh water	Daphnia - Daphnia magna Fish - Oryzias latipes	48 hours 96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
imidazole	OECD 301A Ready Biodegradability - DOC Die-Away Test	90 to 100 % - Readily - 18 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
imidazole	-	-	Readily
Nonylphenol, ethoxylated	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
imidazole	-0.02	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Contains one or more substances considered to have endocrine-disrupting properties.

12.7 Other adverse effects

No known significant effects or critical hazards.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. 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. 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. Disposal of Dako branded material(s) processed by Dako instruments is considered to be 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.

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.

Additional information

- 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

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SECTION 15: Regulatory information

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
☑ Nonylphenol, ethoxylated	Endocrine disrupting properties for environment	Listed	43	7/3/2017

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
☑ Nonylphenol, ethoxylated	Substance of equivalent concern for environment Endocrine disrupting properties for environment	Candidate	ED/169/2012	12/19/2012
Nonylphenol, ethoxylated		Recommended	ED/69/2013	7/3/2017

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

Ingredient name	CAS no.	Status
☑ DAB Substrate Buffer	9016-45-9	30
Nonylphenol, ethoxylated		46

Label : Restricted to professional users.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Ingredient name	Annex	Status
☑ Nonylphenol ethoxylates	Annex I - Part 1	Listed
Nonylphenol ethoxylates	Annex I - Part 2	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** : At least one component is not listed in DSL but all such components are listed in NDSL.
- China** : All components are listed or exempted.

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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	: 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	: ATE = Acute Toxicity Estimate 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 N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Repr. 1B, H360D	Calculation method

Full text of abbreviated H statements

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360D	May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
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
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2

DAB Substrate Buffer

SECTION 16: Other information

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