

SAFETY DATA SHEET

Agilent DNA 12000 Kit, Part Number 5067-1508

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

1.1 Product identifier

Product name	: Agilent DNA 12000 Kit, Part Number 5067-1508	
Part no. (chemical kit)	: 5067-1508	
Part no.	: <u>Reagents DNA 12000</u>	<u>G2938-80022</u>
	DNA 12000 Gel Matrix	Not available.
	DNA Dye Concentrate	Not available.
	DNA 12000 Marker	Not available.
	DNA 12000 Ladder	Not available.

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

Identified uses	: Analytical chemistry. Research and Development	
	DNA 12000 Gel Matrix	3 x 0.5 ml
	DNA Dye Concentrate	1 x 0.09 ml
	DNA 12000 Marker	2 x 1.2 ml
	DNA 12000 Ladder	1 x 0.035 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®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	: DNA 12000 Gel Matrix	Mixture
	DNA Dye Concentrate	Mixture
	DNA 12000 Marker	Mixture
	DNA 12000 Ladder	Mixture

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

Not classified.

DNA 12000 Gel Matrix	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
DNA Dye Concentrate	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
DNA 12000 Marker	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
DNA 12000 Ladder	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

SECTION 2: Hazards identification

Ingredients of unknown toxicity	: DNA 12000 Gel Matrix DNA 12000 Marker	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% 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%
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Ingredients of unknown ecotoxicity : Contains 2.3% 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	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	No signal word. No signal word. No signal word. No signal word.
Hazard statements	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Precautionary statements

Prevention	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
Response	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
Storage	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.

Special packaging requirements

Tactile warning of danger	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
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SECTION 2: Hazards identification

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: DNA 12000 Gel Matrix	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	DNA Dye Concentrate	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	DNA 12000 Marker	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	DNA 12000 Ladder	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	: DNA 12000 Gel Matrix	None known.
	DNA Dye Concentrate	None known.
	DNA 12000 Marker	None known.
	DNA 12000 Ladder	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	: DNA 12000 Gel Matrix	Mixture
	DNA Dye Concentrate	Mixture
	DNA 12000 Marker	Mixture
	DNA 12000 Ladder	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	: DNA 12000 Gel Matrix	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.
	DNA Dye Concentrate	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.
	DNA 12000 Marker	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.
	DNA 12000 Ladder	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	: DNA 12000 Gel Matrix	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.
	DNA Dye Concentrate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	DNA 12000 Marker	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.
	DNA 12000 Ladder	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

SECTION 4: First aid measures

Skin contact	: DNA 12000 Gel Matrix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DNA Dye Concentrate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DNA 12000 Marker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DNA 12000 Ladder	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: DNA 12000 Gel Matrix	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.
	DNA Dye Concentrate	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.
	DNA 12000 Marker	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.
	DNA 12000 Ladder	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	: DNA 12000 Gel Matrix	No action shall be taken involving any personal risk or without suitable training.
	DNA Dye Concentrate	No action shall be taken involving any personal risk or without suitable training.
	DNA 12000 Marker	No action shall be taken involving any personal risk or without suitable training.
	DNA 12000 Ladder	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: DNA 12000 Gel Matrix	No known significant effects or critical hazards.
	DNA Dye Concentrate	No known significant effects or critical hazards.
	DNA 12000 Marker	No known significant effects or critical hazards.
	DNA 12000 Ladder	No known significant effects or critical hazards.
Inhalation	: DNA 12000 Gel Matrix	No known significant effects or critical hazards.
	DNA Dye Concentrate	No known significant effects or critical hazards.
	DNA 12000 Marker	No known significant effects or critical hazards.
	DNA 12000 Ladder	No known significant effects or critical hazards.
Skin contact	: DNA 12000 Gel Matrix	No known significant effects or critical hazards.
	DNA Dye Concentrate	No known significant effects or critical hazards.
	DNA 12000 Marker	No known significant effects or critical hazards.
	DNA 12000 Ladder	No known significant effects or critical hazards.
Ingestion	: DNA 12000 Gel Matrix	No known significant effects or critical hazards.
	DNA Dye Concentrate	No known significant effects or critical hazards.
	DNA 12000 Marker	No known significant effects or critical hazards.
	DNA 12000 Ladder	No known significant effects or critical hazards.

Over-exposure signs/symptoms

SECTION 4: First aid measures

Eye contact	:	DNA 12000 Gel Matrix	No specific data.
		DNA Dye Concentrate	No specific data.
		DNA 12000 Marker	No specific data.
		DNA 12000 Ladder	No specific data.
Inhalation	:	DNA 12000 Gel Matrix	No specific data.
		DNA Dye Concentrate	No specific data.
		DNA 12000 Marker	No specific data.
		DNA 12000 Ladder	No specific data.
Skin contact	:	DNA 12000 Gel Matrix	No specific data.
		DNA Dye Concentrate	No specific data.
		DNA 12000 Marker	No specific data.
		DNA 12000 Ladder	No specific data.
Ingestion	:	DNA 12000 Gel Matrix	No specific data.
		DNA Dye Concentrate	No specific data.
		DNA 12000 Marker	No specific data.
		DNA 12000 Ladder	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	DNA 12000 Gel Matrix	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.
		DNA Dye Concentrate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		DNA 12000 Marker	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.
		DNA 12000 Ladder	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	DNA 12000 Gel Matrix	No specific treatment.
		DNA Dye Concentrate	No specific treatment.
		DNA 12000 Marker	No specific treatment.
		DNA 12000 Ladder	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	DNA 12000 Gel Matrix	Use an extinguishing agent suitable for the surrounding fire.
		DNA Dye Concentrate	Use an extinguishing agent suitable for the surrounding fire.
		DNA 12000 Marker	Use an extinguishing agent suitable for the surrounding fire.
		DNA 12000 Ladder	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	DNA 12000 Gel Matrix	None known.
		DNA Dye Concentrate	None known.
		DNA 12000 Marker	None known.
		DNA 12000 Ladder	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:	DNA 12000 Gel Matrix	In a fire or if heated, a pressure increase will occur and the container may burst.
		DNA Dye Concentrate	In a fire or if heated, a pressure increase will occur and the container may burst.
		DNA 12000 Marker	In a fire or if heated, a pressure increase will occur and the container may burst.
		DNA 12000 Ladder	In a fire or if heated, a pressure increase will occur and the container may burst.

SECTION 5: Firefighting measures

Hazardous combustion products	: DNA 12000 Gel Matrix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides
	DNA Dye Concentrate	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	DNA 12000 Marker	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides
	DNA 12000 Ladder	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters	: DNA 12000 Gel Matrix	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.
	DNA Dye Concentrate	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.
	DNA 12000 Marker	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.
	DNA 12000 Ladder	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	: DNA 12000 Gel Matrix	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.
	DNA Dye Concentrate	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.
	DNA 12000 Marker	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.
	DNA 12000 Ladder	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

SECTION 6: Accidental release measures

For non-emergency personnel	:	DNA 12000 Gel Matrix	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.
		DNA Dye Concentrate	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.
		DNA 12000 Marker	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.
		DNA 12000 Ladder	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	:	DNA 12000 Gel Matrix	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".
		DNA Dye Concentrate	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".
		DNA 12000 Marker	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".
		DNA 12000 Ladder	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	:	DNA 12000 Gel Matrix	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).
		DNA Dye Concentrate	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).
		DNA 12000 Marker	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).
		DNA 12000 Ladder	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	:	DNA 12000 Gel Matrix	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.
		DNA Dye Concentrate	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively,

SECTION 6: Accidental release measures

DNA 12000 Marker	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. 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.
DNA 12000 Ladder	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	: DNA 12000 Gel Matrix	Put on appropriate personal protective equipment (see Section 8).
	DNA Dye Concentrate	Put on appropriate personal protective equipment (see Section 8).
	DNA 12000 Marker	Put on appropriate personal protective equipment (see Section 8).
	DNA 12000 Ladder	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: DNA 12000 Gel Matrix	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.
	DNA Dye Concentrate	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.
	DNA 12000 Marker	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.
	DNA 12000 Ladder	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	: DNA 12000 Gel Matrix	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
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SECTION 7: Handling and storage

DNA Dye Concentrate	appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. 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.
DNA 12000 Marker	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.
DNA 12000 Ladder	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	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Not available. Not available. Not available. 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
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SECTION 8: Exposure controls/personal protection

of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs 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	:	DNA 12000 Gel Matrix	Liquid.
		DNA Dye Concentrate	Liquid.
		DNA 12000 Marker	Liquid.
		DNA 12000 Ladder	Liquid.
Colour	:	DNA 12000 Gel Matrix	Not available.
		DNA Dye Concentrate	Blue.
		DNA 12000 Marker	Not available.
		DNA 12000 Ladder	Not available.
Odour	:	DNA 12000 Gel Matrix	Not available.
		DNA Dye Concentrate	Not available.
		DNA 12000 Marker	Not available.
		DNA 12000 Ladder	Not available.

SECTION 9: Physical and chemical properties

Odour threshold : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate Not available.
 DNA 12000 Marker Not available.
 DNA 12000 Ladder Not available.

Melting point/freezing point : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate 18.5°C
 DNA 12000 Marker 0°C
 DNA 12000 Ladder 0°C

Initial boiling point and boiling range : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate 189°C
 DNA 12000 Marker 100°C
 DNA 12000 Ladder 100°C

Flammability : DNA 12000 Gel Matrix Not applicable.
 DNA Dye Concentrate Not applicable.
 DNA 12000 Marker Not applicable.
 DNA 12000 Ladder Not applicable.

Upper/lower flammability or explosive limits : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate Lower: 2.6%
 Upper: 42%
 DNA 12000 Marker Not available.
 DNA 12000 Ladder Not available.

Flash point : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate Closed cup: 87°C
 DNA 12000 Marker Not available.
 DNA 12000 Ladder Not available.

Auto-ignition temperature :

Ingredient name	°C	Method
DNA Dye Concentrate		
dimethyl sulfoxide	300 to 302	-

Decomposition temperature : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate Not available.
 DNA 12000 Marker Not available.
 DNA 12000 Ladder Not available.

pH : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate Not available.
 DNA 12000 Marker Not available.
 DNA 12000 Ladder Not available.

Viscosity : DNA 12000 Gel Matrix Not available.
 DNA Dye Concentrate Not available.
 DNA 12000 Marker Not available.
 DNA 12000 Ladder Not available.

Solubility(ies) :

Media	Result
DNA 12000 Gel Matrix water	Soluble
DNA Dye Concentrate water	Soluble
DNA 12000 Marker water	Soluble
DNA 12000 Ladder water	Soluble

Partition coefficient: n-octanol/water : DNA 12000 Gel Matrix Not applicable.
 DNA Dye Concentrate Not applicable.
 DNA 12000 Marker Not applicable.
 DNA 12000 Ladder Not applicable.

Vapour pressure :

SECTION 9: Physical and chemical properties

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
DNA 12000 Gel Matrix						
water	17.5	2.3	-	92.258	12.3	-
DNA Dye Concentrate						
dimethyl sulfoxide	0.42	0.056	EU A.4	-	-	-
DNA 12000 Marker						
water	17.5	2.3	-	92.258	12.3	-
DNA 12000 Ladder						
water	17.5	2.3	-	92.258	12.3	-

- Evaporation rate** : DNA 12000 Gel Matrix Not available.
DNA Dye Concentrate Not available.
DNA 12000 Marker Not available.
DNA 12000 Ladder Not available.
- Relative density** : DNA 12000 Gel Matrix Not available.
DNA Dye Concentrate Not available.
DNA 12000 Marker Not available.
DNA 12000 Ladder Not available.
- Vapour density** : DNA 12000 Gel Matrix Not available.
DNA Dye Concentrate 2.7 [Air = 1]
DNA 12000 Marker Not available.
DNA 12000 Ladder Not available.
- Explosive properties** : DNA 12000 Gel Matrix Not available.
DNA Dye Concentrate Not available.
DNA 12000 Marker Not available.
DNA 12000 Ladder Not available.
- Oxidising properties** : DNA 12000 Gel Matrix Not available.
DNA Dye Concentrate Not available.
DNA 12000 Marker Not available.
DNA 12000 Ladder Not available.
- Particle characteristics**
- Median particle size** : DNA 12000 Gel Matrix Not applicable.
DNA Dye Concentrate Not applicable.
DNA 12000 Marker Not applicable.
DNA 12000 Ladder Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	No specific data. No specific data. No specific data. No specific data.
10.5 Incompatible materials	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	: DNA 12000 Gel Matrix DNA Dye Concentrate DNA 12000 Marker DNA 12000 Ladder	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. 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

Not available.

Acute toxicity estimates

N/A

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

SECTION 11: Toxicological information

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)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

: DNA 12000 Gel Matrix	Not available.
: DNA Dye Concentrate	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
: DNA 12000 Marker	Not available.
: DNA 12000 Ladder	Not available.

Potential acute health effects

Inhalation	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Eye contact	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No specific data. No specific data. No specific data. No specific data.
Ingestion	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No specific data. No specific data. No specific data. No specific data.
Skin contact	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No specific data. No specific data. No specific data. No specific data.
Eye contact	: DNA 12000 Gel Matrix : DNA Dye Concentrate : DNA 12000 Marker : DNA 12000 Ladder	No specific data. No specific data. No specific data. 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.

SECTION 11: Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Not available.

General	:	DNA 12000 Gel Matrix	No known significant effects or critical hazards.
		DNA Dye Concentrate	No known significant effects or critical hazards.
		DNA 12000 Marker	No known significant effects or critical hazards.
		DNA 12000 Ladder	No known significant effects or critical hazards.
Carcinogenicity	:	DNA 12000 Gel Matrix	No known significant effects or critical hazards.
		DNA Dye Concentrate	No known significant effects or critical hazards.
		DNA 12000 Marker	No known significant effects or critical hazards.
		DNA 12000 Ladder	No known significant effects or critical hazards.
Mutagenicity	:	DNA 12000 Gel Matrix	No known significant effects or critical hazards.
		DNA Dye Concentrate	No known significant effects or critical hazards.
		DNA 12000 Marker	No known significant effects or critical hazards.
		DNA 12000 Ladder	No known significant effects or critical hazards.
Reproductive toxicity	:	DNA 12000 Gel Matrix	No known significant effects or critical hazards.
		DNA Dye Concentrate	No known significant effects or critical hazards.
		DNA 12000 Marker	No known significant effects or critical hazards.
		DNA 12000 Ladder	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

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

Not available.

SECTION 12: Ecological information

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 : 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 : 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.

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

None of the components are listed.

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

No listed substance

Label	:	DNA 12000 Gel Matrix	Not applicable.
		DNA Dye Concentrate	Not applicable.
		DNA 12000 Marker	Not applicable.
		DNA 12000 Ladder	Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) : Listed

- Air

Ozone depleting substances (1005/2009/EU)

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.
Eurasian Economic Union	:	Russian Federation inventory: Not determined.
Japan	:	Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.


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SECTION 15: Regulatory information

Republic of Korea	: Not determined.
Taiwan	: Not determined.
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 :

- 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

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

Version : 1

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