

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

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

1.1 Product identifier

Product name **Lysis buffer type 15**

Catalogue Number **28932043**



Component Number **28932043V**

Product description Not available.

Product type Liquid.

Other means of identification Not available.

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

Identified uses

 Use in laboratories

1.3 Details of the supplier of the safety data sheet

Supplier

Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 1494 508000

Hours of operation

08.30 - 17.00

Person who prepared the SDS : sds_author@cytiva.com

United Kingdom (UK)

Cytiva UK
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA
t: 0870 606 1921

1.4 Emergency telephone number

Call INFOTRAC 24 Hour number:
001-352-323-3500 (Call Collect).

National advisory body/Poison Centre

United Kingdom (UK)

Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE www.toxbase.org.

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:
In England and Wales: NHS Direct - 0845 4647 or 111
In Scotland: NHS 24 - 08454 24 24 24
In N Ireland: Contact your local GP or pharmacist during normal hours; click here (www.gpoutofhours.hscni.net/) for GP services Out-of-Hours.



SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition Mixture

Classification according to UK CLP/GHS

☒ Acute Tox. 4, H302
☒ Skin Irrit. 2, H315
☒ Eye Irrit. 2, H319
☒ Aquatic Chronic 2, H411

☒ The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity ☒ 1.9 percent of the mixture consists of component(s) of unknown acute dermal toxicity
☒ 71.9 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

Ingredients of unknown ecotoxicity ☒ Contains 66.9% 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

Hazard pictograms



Signal word ☒ Warning

Hazard statements ☒ Harmful if swallowed.
☒ Causes skin irritation.
☒ Causes serious eye irritation.
☒ Toxic to aquatic life with long lasting effects.

Precautionary statements

General ☒ Not applicable.

Prevention ☒ Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response ☒ Collect spillage. IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage ☒ Not applicable.

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

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

Containers to be fitted with child-resistant fastenings ☒ Not applicable.

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	Type
Guanidinium chloride	EC: 200-002-3 CAS: 50-01-1 Index: 607-148-00-0	66.87	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	CAS: 9036-19-5	5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]

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

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 physical, 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.
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 adverse health effects persist or are severe. 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. 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. If necessary, call a poison center or physician. 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: irritation redness
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. This material is toxic to aquatic life with long lasting effects. 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
nitrogen oxides
halogenated compounds

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 British standard BS 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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



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.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E2	200 tonnes	500 tonnes

7.3 Specific end use(s)

Recommendations	Analytical chemistry. Laboratory chemicals Research and Development
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: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS 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.
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DNELs/DMELs

Product/ingredient name	Result
guanidinium chloride	DNEL - General population - Long term - Oral 0.5 mg/kg bw/day Effects: Systemic
	DNEL - General population - Long term - Dermal 0.5 mg/kg bw/day Effects: Systemic
	DNEL - General population - Long term - Inhalation 0.87 mg/m³ Effects: Systemic
	DNEL - Workers - Long term - Dermal 1 mg/kg bw/day Effects: Systemic
	DNEL - Workers - Long term - Inhalation 3.5 mg/m³ Effects: Systemic
	DNEL - Workers - Short term - Inhalation 10.5 mg/m³ Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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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.
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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: chemical splash goggles.
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	Colourless to light yellow.
Odour	Odourless.
Odour threshold	Not available.
pH	7 [Conc. (% w/w): 100%]
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Flash point	[Product does not sustain combustion.]

Relative density	Not available.
Vapour density	Not available.
Explosive properties	Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidising materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
Oxidising properties	Not available.
Particle characteristics	
Median particle size	Not applicable.

9.2 Other information

Not available.	
Burning time	Not applicable.
Burning rate	Not applicable.
Solubility in water	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	No specific data.
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
guanidinium chloride	Rat - Oral - LD50 475 mg/kg <u>Toxic effects:</u> Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Excitement Gastrointestinal - Hypermotility, diarrhea
Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	Rat - Oral - LD50 4190 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)
Lysis buffer type 15	663.2	N/A	N/A	N/A	N/A
guanidinium chloride	475	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	500	N/A	N/A	N/A	N/A

Skin corrosion/irritation

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

Serious eye damage/eye irritation

Product/ingredient name	Result
Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	Rabbit - Eyes - Mild irritant <u>Amount/concentration applied:</u> 15 mg Rabbit - Eyes - Severe irritant <u>Amount/concentration applied:</u> 1 %
Conclusion/Summary [Product]	Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] Not available.

Respiratory

Conclusion/Summary [Product] Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
<input checked="" type="checkbox"/> Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	STOT SE 3, H335 (Respiratory tract irritation)

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.

Potential acute health effects

Inhalation	<input checked="" type="checkbox"/> Causes serious eye irritation.
Ingestion	<input checked="" type="checkbox"/> Harmful if swallowed.
Skin contact	<input checked="" type="checkbox"/> Causes skin irritation.
Eye contact	<input checked="" type="checkbox"/> Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	<input checked="" type="checkbox"/> No specific data.
Ingestion	<input checked="" type="checkbox"/> No specific data.
Skin contact	<input checked="" type="checkbox"/> Adverse symptoms may include the following: irritation redness
Eye contact	<input checked="" type="checkbox"/> Adverse symptoms may include the following: pain or irritation watering redness

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

Short term exposure

Potential immediate effectsNot available.

Potential delayed effectsNot available.

Long term exposure

Potential immediate effectsNot available.

Potential delayed effectsNot available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product]Not available.

GeneralNo known significant effects or critical hazards.

CarcinogenicityNo known significant effects or critical hazards.

MutagenicityNo known significant effects or critical hazards.

Reproductive toxicityNo known significant effects or critical hazards.

Other informationNot available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	Acute - LC50 - Fresh water Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i> Size: 5 to 6 cm 7200 µg/l [96 hours] Effect: Mortality Acute - EC50 - Fresh water Algae - Green algae - <i>Selenastrum sp.</i> 210 µg/l [96 hours] Effect: Population Acute - LC50 - Fresh water OECD Daphnia - Water flea - <i>Daphnia magna</i> Age: <24 hours 2.518 mg/l [48 hours] Effect: Mortality

Conclusion/Summary [Product]Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product]Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Guanidinium chloride	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
50 - ≤75	-1.7	-	Low

12.4 Mobility in soil

Soil/water partition coefficientNot available.

MobilityNot available.

12.5 Results of PBT and vPvB assessment

Guanidinium chloride	No	N/A	N/A	No	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	No	N/A	N/A	No	N/A	N/A	N/A

12.6 Other adverse effectsNo known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

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

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	ADN	IMDG	IATA
14.1 UN number	Not regulated.	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.	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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
None of the components are listed.				

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Substance of equivalent concern for environment	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated covering well-defined substances and UVCB substances, polymers and homologues	Candidate	-	12/19/2012

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

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

Product/ingredient name	%	Designation [Usage]
Lysis buffer type 15	≥90	3

Labelling ☒ Not applicable.

Seveso Directive☒ This product is controlled under the Seveso Directive.**Danger criteria****Category**☒ 2**EU regulations**

**Industrial emissions
(integrated pollution
prevention and control) - Air** Not listed

**Industrial emissions
(integrated pollution
prevention and control) -
Water** Not listed

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**United States** All components are listed or exempted.**Canada inventory** All components are listed or exempted.**China** ☒ All components are listed or exempted.**Japan** All components are listed or exempted.**15.2 Chemical safety
assessment**☒ This product contains substances for which Chemical Safety Assessments are still required.**SECTION 16: Other information**☒ Indicates information that has changed from previously issued version.**Abbreviations and acronyms**

ATE = Acute Toxicity Estimate
 GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = GB CLP-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 SGG = Segregation Group
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification		Justification
Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411		Calculation method Calculation method Calculation method Calculation method
Full text of abbreviated H statements	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.
Full text of classifications	H411	Toxic to aquatic life with long lasting effects.
	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
	Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
	Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Date of printing	20 February 2026	SKIN CORROSION/IRRITATION - Category 2
		SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
Date of issue/ Date of revision	20 February 2026	
Date of previous issue	01 July 2011	
Version	5	
Notice to reader		
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