


SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

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

1.1 Product identifier

Product name	Solubilizer, 25 g; part of '2D Fractionation Kit'	
Catalogue Number	80-6501-04	 9 0 8 0 6 5 0 1 0 4
Product description	Not available.	
Product type	Solid.	
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

<u>Supplier</u>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	Hours of operation 08.30 - 17.00
	Person who prepared the MSDS : sds_author@cytiva.com	
		1.4 Emergency telephone number 0870 606 1921
United Kingdom (UK)	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA	

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.
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Acute Tox. 4, H302
Carc. 2, H351
Repr. 2, H361d (Unborn child)
Aquatic Chronic 2, H411

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

Ingredients of unknown toxicity	5 percent of the mixture consists of component(s) of unknown acute oral toxicity 100 percent of the mixture consists of component(s) of unknown acute dermal toxicity 100 percent of the mixture consists of component(s) of unknown acute inhalation toxicity
Ingredients of unknown ecotoxicity	Contains 5 % 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.
Suspected of damaging the unborn child.
Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Avoid release to the environment.

Response IF exposed or concerned: Get medical attention. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.

Storage Store locked up.

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

Hazardous ingredients thiourea

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	%	<u>Classification</u>	Type
			Regulation (EC) No. 1272/2008 [CLP]	
thiourea	EC: 200-543-5 CAS: 62-56-6 Index: 612-082-00-0	<30	Acute Tox. 3, H301 Carc. 2, H351 Repr. 2, H361d (Unborn child) Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs 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 with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern
[6] Additional disclosure due to company policy

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 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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	No specific data.
Inhalation	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Skin contact	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Ingestion	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	No specific treatment.
See toxicological information (Section 11)	

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. 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	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste 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

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). 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 release to the environment. 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

Store between the following temperatures: 4 to 30°C (39.2 to 86°F). 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.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E2	200	500

7.3 Specific end use(s)

Recommendations	Analytical chemistry. Analytical reagent. Research and Development
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Industrial sector specific solutions

Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario (s).

8.1 Control parameters**Occupational exposure limits**

No exposure limit value known.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
thiourea	DNEL	Long term Oral	0.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.2 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	1 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.7 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.4 mg/kg bw/day	Workers	Systemic

PNECs

No PECs 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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Colour	White.
Odour	Ammoniacal. [Slight]
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2 Other information

Burning time	Not available.
Burning rate	Not available.
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	Species	Dose	Exposure
thiourea	LD50 Oral	Rat	125 mg/kg	-

Conclusion/Summary 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)
Solubilizer, 25 g; part of '2D Fractionation Kit' thiourea	437.5 125	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Irritation/Corrosion

Conclusion/Summary Not available.

Sensitisation

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)

Not available.

Aspiration hazard

Not available.

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

Potential acute health effects

Inhalation No known significant effects or critical hazards.

Ingestion Harmful if swallowed.

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

Not available.

Conclusion/Summary Not available.



General	No known significant effects or critical hazards.
Carcinogenicity	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	Suspected of damaging the unborn child.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Other information	Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
thiourea	Acute EC50 4800 µg/l Fresh water Acute LC50 9000 µg/l Fresh water Acute LC50 >100 mg/l Fresh water Chronic EC10 0.3 mg/l Fresh water Chronic NOEC 0.1 mg/l Fresh water	Algae - Scenedesmus abundans Daphnia - Daphnia magna Fish - Pimephales promelas Algae - Scenedesmus subspicatus Daphnia - Daphnia magna	96 hours 48 hours 96 hours 96 hours 21 days

Conclusion/Summary Not available.

12.2 Persistence and degradability

Conclusion/Summary Not available.

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

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
thiourea	-1.08	2	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 Other adverse effects No 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	UN3077	UN3077	UN3077	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (thiourea, mixture)	Environmentally hazardous substance, solid, n.o.s. (thiourea, mixture)	Environmentally hazardous substance, solid, n.o.s. (thiourea, mixture). Marine pollutant (thiourea)	Environmentally hazardous substance, solid, n.o.s. (thiourea, mixture)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.
Additional information	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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 Annex II of Marpol and the IBC Code

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 Not applicable.

Other EU regulations

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

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

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.



Danger criteria**Category**

E2

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

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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**Europe** All components are listed or exempted.**United States** All components are listed or exempted.**Canada inventory** Not determined.**China** All components are listed or exempted.**Japan** **Japan inventory (ENCS):** All components are listed or exempted.**Japan inventory (ISHL):** Not determined.**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
 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
Acute Tox. 4, H302 Carc. 2, H351 Repr. 2, H361d (Unborn child) Aquatic Chronic 2, H411	Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H351 Suspected of causing cancer.
 H361d Suspected of damaging the unborn child.
 H411 Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 3, H301 ACUTE TOXICITY (oral) - Category 3
 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4
 Aquatic Chronic 2, H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
 Carc. 2, H351 CARCINOGENICITY - Category 2
 Repr. 2, H361d REPRODUCTIVE TOXICITY (Unborn child) - Category 2

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Version

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

