

GLINT & GLEAM
Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **GLINT & GLEAM**
 Substance type: CLP Mixture

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

Use of the Substance/Mixture : Machine Warewashing Detergent

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

Company : Ecolab Ltd.
 PO Box 11; Winnington Avenue
 Northwich
 Cheshire,
 United Kingdom
 CW8 4DX
 + 44 (0)1606 74488
 ccs@ecolab.com

1.4 Emergency telephone number:

Emergency telephone number : +441618841235
 +32-(0)3-575-5555 Trans-European
 Trans-European

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Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 H319

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**
 P280e Wear eye protection/face protection.

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Special labelling of certain mixtures : Contains: Subtilisin May produce an allergic reaction.

2.3 Other hazards

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Hazardous components**

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Sodium Carbonate	497-19-8 207-838-8 01-2119485498-19	Eye irritation Category 2; H319	30 - < 50
Disodium carbonate, hydrogen peroxide (2:3)	15630-89-4 239-707-6 01-2119457268-30	Oxidizing solids Category 3; H272 Acute toxicity Category 4; H302 Serious eye damage Category 1; H318	10 - < 20
Sodium Silicate	1344-09-8 215-687-4 01-2119448725-31	Skin corrosion Category 1B; H314 Serious eye damage Category 1; H318 Specific target organ toxicity - single exposure Category 3; H335	1 - < 2.5
Oxirane, methyl-, polymer with oxirane, mono(2-propylheptyl) ether	166736-08-9	Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318	1 - < 2.5
Subtilisin	9014-01-1 232-752-2 01-2119480434-38	Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Respiratory sensitization Category 1; H334 Specific target organ toxicity - single exposure Category 3; H335	0.5 - < 1

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES**4.1 Description of first aid measures**

- If inhaled : Get medical attention if symptoms occur.
- In case of skin contact : Wash off with soap and plenty of water.
Get medical attention if symptoms occur.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical attention.
- If swallowed : Rinse mouth.
Get medical attention if symptoms occur.
- Protection of first-aiders : In event of emergency assess the danger before taking action.
Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NO_x)
Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel : Ensure clean-up is conducted by trained personnel only.
Refer to protective measures listed in sections 7 and 8.

Advice 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.

6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.

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See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

- Advice on safe handling : Avoid contact with skin and eyes. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
- Suitable material : Keep in properly labelled containers.
- Unsuitable material : not determined

7.3 Specific end uses

- Specific use(s) : Machine Warewashing Detergent

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Subtilisin	9014-01-1	TWA	0.00004 mg/m ³	UKCOSSTD
Further information	39	One of the suitable measurement methods is the fluorescence polarisation technique developed by the Health and Safety Laboratory (HSL). The previous limit for subtilisin was based on high-volume static sampling to achieve sufficient sensitivity. However, improvements in the analytical methodology have improved the sensitivity and the WEL for subtilisin reflects this. The limit is based on standard personal sampling (MDHS14/4). Short-term reference period (15 minute) sampling is not appropriate.		
	52+53	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma.		
	54	Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from		

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		becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance.
	38	Subtilisins are proteolytic enzymes derived from <i>Bacillus subtilis</i> . They are used in biological washing powders, animal feedstuffs etc. The enzyme preparation contains active enzyme, inactive enzyme and protein residues.
	Sen	Capable of causing occupational asthma.
	16	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
	55	The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.

DNEL

Sodium Carbonate	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 10 mg/m3
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 10 mg/m3
Disodium carbonate, hydrogen peroxide (2:3)	:	End Use: Workers Exposure routes: Dermal Potential health effects: short-term - local Value: 12.8 mg/cm2
		End Use: Workers Exposure routes: Dermal Potential health effects: long-term - local Value: 12.8 mg/cm2
		End Use: Workers Exposure routes: Inhalation Potential health effects: long-term - local Value: 5 mg/m3
Sodium Silicate	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 5.61 mg/m3
		End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 1.59 mg/cm2
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 1.38 mg/m3
		End Use: Consumers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 0.8 mg/cm2

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		End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 0.8 ppm

PNEC

Disodium carbonate, hydrogen peroxide (2:3)	:	Fresh water Value: 0.035 mg/l
		Marine water Value: 0.035 mg/l
		Intermittent release Value: 0.035 mg/l
		STP Value: 16.24 mg/l
Sodium Silicate	:	Fresh water Value: 7.5 mg/l
		Marine water Value: 1 mg/l
		Intermittent use/release Value: 7.5 mg/l
		Sewage treatment plant Value: 348 mg/l

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 : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Eye/face protection (EN 166) : Safety glasses

Safety glasses with side-shields

Hand protection (EN 374) : No special protective equipment required.

Recommended preventive skin protection

Gloves

Nitrile rubber

butyl-rubber

Breakthrough time: 1 – 4 hours

Minimum thickness for butyl-rubber 0.3 mm for nitrile rubber 0.2 mm or equivalent (please refer to the gloves manufacturer/distributor for advice).

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Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Wear suitable protective clothing.

Respiratory protection (EN 143, 14387) : When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type: A-P

When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type:

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Environmental exposure controls

General advice : Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	: Tablets
Colour	: no data available
Odour	: no data available
Flash point	: no data available
pH	: 10.4 - 10.8, Concentration:: 1.00 g/l
Odour Threshold	: no data available
Melting point/freezing point	: no data available
Initial boiling point and boiling range	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available

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Relative density	: no data available
Water solubility	: no data available
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

10.6 Hazardous decomposition products

Hazardous decomposition products	: Depending on combustion properties, decomposition products may include following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
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Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure : Eye contact, Skin contact

Toxicity

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Acute oral toxicity	: Acute toxicity estimate : > 2,000 mg/kg
Acute inhalation toxicity	: There is no data available for this product.
Acute dermal toxicity	: There is no data available for this product.
Skin corrosion/irritation	: There is no data available for this product.
Serious eye damage/eye irritation	: There is no data available for this product.
Respiratory or skin sensitization	: There is no data available for this product.
Carcinogenicity	: There is no data available for this product.
Reproductive effects	: There is no data available for this product.
Germ cell mutagenicity	: There is no data available for this product.
Teratogenicity	: There is no data available for this product.
STOT - single exposure	: There is no data available for this product.
STOT - repeated exposure	: There is no data available for this product.
Aspiration toxicity	: There is no data available for this product.

Components

Acute oral toxicity	: Sodium Carbonate LD50 rat: 2,800 mg/kg
	Disodium carbonate, hydrogen peroxide (2:3) LD50 rat: 1,034 mg/kg
	Subtilisin LD50 rat: 1,800 mg/kg

Components

Acute dermal toxicity	: Sodium Silicate LD50 rat: > 5,000 mg/kg Test substance: Information given is based on data obtained from similar substances.
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Potential Health Effects

Eyes	: Causes serious eye irritation.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Health injuries are not known or expected under normal use.
Inhalation	: Health injuries are not known or expected under normal use.

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Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact : Redness, Pain, Irritation

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

Further information : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Product

Environmental Effects : This product has no known ecotoxicological effects.

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to fish : Sodium Carbonate
96 h LC50 *Lepomis macrochirus* (Bluegill sunfish): 300 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Sodium Carbonate
48 h EC50 *Ceriodaphnia* (water flea): 213.5 mg/l

Disodium carbonate, hydrogen peroxide (2:3)
48 h EC50 *Daphnia*: 4.9 mg/l

Sodium Silicate
48 h EC50 *Daphnia magna* (Water flea): 1,700 mg/l

Subtilisin
48 h EC50: 1.4 mg/l

Components

Toxicity to algae : Sodium Silicate
72 h EC50 *Desmodesmus subspicatus* (green algae): 207 mg/l

Components

Toxicity to bacteria : Sodium Silicate
> 348 mg/l

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12.2 Persistence and degradability

Product

no data available

Components

Biodegradability : Sodium Carbonate
Result: Not applicable - inorganic

Disodium carbonate, hydrogen peroxide (2:3)
Result: Not applicable - inorganic

Oxirane, methyl-, polymer with oxirane, mono(2-propylheptyl) ether
Result: Readily biodegradable.

Subtilisin
Result: Readily biodegradable.

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product : Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.
Dispose of wastes in an approved waste disposal facility.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste

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handling site for recycling or disposal.
Do not re-use empty containers.

Guidance for Waste Code selection : Organic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number:	Not applicable.
14.2 UN proper shipping name:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION
14.3 Transport hazard class(es):	Not applicable.
14.4 Packing group:	Not applicable.
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Air transport (IATA)

14.1 UN number:	Not applicable.
14.2 UN proper shipping name:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION
14.3 Transport hazard class(es):	Not applicable.
14.4 Packing group:	Not applicable.
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number:	Not applicable.
14.2 UN proper shipping name:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION
14.3 Transport hazard class(es):	Not applicable.
14.4 Packing group:	Not applicable.
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

Section: 15. REGULATORY INFORMATION

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

INTERNATIONAL CHEMICAL CONTROL LAWS

GLINT & GLEAM**15.2 Chemical Safety Assessment:**

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION**Procedure used to derive the classification according to REGULATION (EC) No 1272/2008**

Classification	Justification
Eye irritation 2, H319	Calculation method

Full text of H-Statements

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; ECx – Concentration associated with x% response; ELx – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErCx – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO – International Maritime Organization; ISHL – Industrial Safety and Health Law (Japan); ISO – International Organisation for Standardization; KECI – Korea Existing Chemicals Inventory; LC50 – Lethal Concentration to 50 % of a test population; LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL – International Convention for the Prevention of Pollution from Ships; n.o.s. – Not Otherwise Specified; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; NZIoC – New Zealand Inventory of Chemicals; OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS – Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR – (Quantitative) Structure Activity Relationship; REACH – Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet : IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERICards, Non European official regulatory data and other data sources.

Prepared By : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.