

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 24-Apr-2023 Revision Date 04-Mar-2024 Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Sodium cyanide

Cat No.: 370310000; 370310010; 370310050

 Index No
 006-007-00-5

 CAS No
 143-33-9

 EC No
 205-599-4

 Molecular Formula
 C N Na

REACH registration number 01-2119480141-49

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

Recommended Use Laboratory chemicals.

Sector of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Product category PC21 - Laboratory chemicals

Process categories PROC15 - Use as a laboratory reagent

Environmental release category ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company

UK entity/business name

Fisher Scientific UK
Bishop Meadow Road.

Loughborough, Leicestershire LE11 5RG, United Kingdom

EU entity/business name Thermo Fisher Scientific

Janssen Pharmaceuticalaan 3a, 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

ACR37031

Sodium cyanide Revision Date 04-Mar-2024

Substances/mixtures corrosive to metal	Category 1 (H290)
<u>Health hazards</u>	
Acute oral toxicity Acute dermal toxicity Acute Inhalation Toxicity - Dusts and Mists Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation Specific target organ toxicity - (repeated exposure)	Category 1 (H300) Category 1 (H310) Category 1 (H330) Category 2 (H315) Category 2 (H319) Category 1 (H372)
Environmental hazards	
Acute aquatic toxicity Chronic aquatic toxicity	Category 1 (H400) Category 1 (H410)

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

H290 - May be corrosive to metals

H300 + H310 + H330 - Fatal if swallowed, in contact with skin or if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H372 - Causes damage to organs through prolonged or repeated exposure

H410 - Very toxic to aquatic life with long lasting effects

EUH032 - Contact with acids liberates very toxic gas

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment This product does not contain any known or suspected endocrine disruptors Toxicity to Soil Dwelling Organisms

Toxic to terrestrial invertebrates

3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Sodium cyanide	143-33-9	EEC No. 205-599-4	<100	Met. Corr. 1 (H290) STOT RE 1 (H372) Acute Tox. 1 (H300) Acute Tox. 1 (H310) Acute Tox. 1 (H330) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) EUH032
Sodium hydroxide	1310-73-2	215-185-5	0.3-0.8	Met. Corr. 1 (H290) Skin Corr. 1A (H314) Eye Dam. 1 (H318)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Sodium cyanide	-	10	-
Sodium hydroxide	Skin Corr. 1A :: C>=5% Skin Corr. 1B :: 2%<=C<5% Met. Corr. 1 :: C ≥ 2% Eye Irrit. 2 :: 0.5%<=C<2% Skin Irrit. 2 :: 0.5%<=C<2%	-	-

REACH registration number	01-2119480141-49
---------------------------	------------------

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Eye Contact In the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15

minutes.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Immediate medical attention is required.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

Systemic Toxicity: Respiratory disorders: Symptoms may include tightness in the chest, flushing, headache, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions, and shock: May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood): Exposure may result in death

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician

Symptoms may be delayed. Treat as cyanide poisoning. Exposure may result in death. The effects may be delayed therefore medical observation is essential.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Non-combustible. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Provide adequate ventilation. Wear self-contained breathing apparatus and protective suit. Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Do not expose spill to water. Keep in suitable, closed containers for disposal. Prevent contact with water. Do NOT use water for clean-up

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

Sodium cyanide Revision Date 04-Mar-2024

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Store under an inert atmosphere. Keep container tightly closed in a dry and well-ventilated place. Protect from moisture.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany)

Class 6.1B

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Sodium cyanide	STEL: 5 mg/m ³ 15 min	TWA: 1 mg/m ³ (8h)	TWA: 1 mg/m ³ 8 hr. CN
	TWA: 1 mg/m ³ 8 hr	STEL: 5 mg/m ³ (15min)	STEL: 5 mg/m ³ 15 min
	Skin	Skin	Skin
Sodium hydroxide	2 mg/m³ STEL		STEL: 2 mg/m ³ 15 min

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Sodium cyanide 143-33-9 (<100)		DNEL = 3.03mg/kg bw/day		DNEL = 0.102mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Sodium cyanide 143-33-9 (<100)		DNEL = 9.4mg/m ³		DNEL = 0.72mg/m ³
Sodium hydroxide 1310-73-2 (0.3-0.8)			DNEL = 1mg/m ³	

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Sodium cyanide	PNEC = 1µg/L	PNEC = 4µg/kg	PNEC = $3.2\mu g/L$	PNEC = 50µg/L	PNEC = 7µg/kg soil
143-33-9 (<100)		sediment dw			dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Sodium cyanide 143-33-9 (<100)	PNEC = 0.2µg/L	PNEC = 0.8µg/kg sediment dw			

8.2. Exposure controls

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	> 480 minutes	0.35 mm	EN 374	As tested under EN374-3 Determination of
Viton (R)	> 480 minutes	0.5 mm		Resistance to Permeation by Chemicals
Neoprene gloves	> 60 minutes	0.45 mm		
PVC	< 60 minutes	0.18 mm		

Skin and body protection Long sleeved clothing.

Inspect gloves before use.

Small scale/Laboratory use

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits

are exceeded or if irritation or other symptoms are experienced **Recommended Filter type:** Particulates filter conforming to EN 143

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Particle filtering: EN149:2001 When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State Solid

Appearance White

Odor bitter almonds
Odor Threshold No data available
Melting Point/Range 562 °C / 1043.6 °F
Softening Point No data available
Boiling Point/Range 1496 °C / 2724.8 °F

Sodium cyanide Revision Date 04-Mar-2024

Solid

Solid

Flammability (liquid) Not applicable

Flammability (solid,gas)

Explosion Limits

No information available

No data available

Flash Point No information available Method - No information available

Autoignition Temperature No data available Decomposition Temperature No data available

pH 11-12 20 g/l aq. sol

Viscosity Not applicable Solid

Water Solubility 370 g/L (20°C)

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component log Pow
Sodium cyanide -0.44
Vanor Pressure 1 bPa (81)

Vapor Pressure1 hPa (817°C)Density / Specific GravityNo data availableBulk Density750 - 950 kg/m³Vapor DensityNot applicable

Particle characteristics No data available

9.2. Other information

Molecular FormulaC N NaMolecular Weight49

Evaporation Rate Not applicable - Solid

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Yes Contact with acids liberates very toxic gas

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Incompatible products. Exposure to moist air or water.

10.5. Incompatible materials

Acids. Strong oxidizing agents. Carbon dioxide (CO2). Metals.

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Hydrogen cyanide (hydrocyanic acid).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

(a) acute toxicity;

OralCategory 1DermalCategory 1InhalationCategory 1

Revision Date 04-Mar-2024

Sodium cyanide

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium cyanide	LD50 = 5.733 mg/kg (Rat)	LD50 = 14.602 mg/kg (Rabbit)	LC50 = 0.16 mg/L (Rat) 1 h
Sodium hydroxide	140 - 340 mg/kg (Rat)	1350 mg/kg (Rabbit)	-

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

RespiratoryBased on available data, the classification criteria are not met **Skin**Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

Not mutagenic in AMES Test

(f) carcinogenicity; Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Category 1

Target Organs Thyroid, Blood.

(j) aspiration hazard; Not applicable

Solid

Symptoms / effects,both acute and Systemic Toxicity. Respiratory disorders. Symptoms may include tightness in the chest,

delayed

flushing, headache, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions, and shock. May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Exposure may result in

death.

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effectsVery toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment. The product contains following substances which are hazardous for the

environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Sodium cyanide	LC50: 0.0558 - 0.0586 mg/L,		
	96h flow-through (Oncorhynchus		
	mykiss)		
	LC50: 0.0391 - 0.0548 mg/L,		

Revision Date 04-Mar-2024 Sodium cyanide

	201 1 1/0 1 1	
	96h static (Oncorhynchus	
	mykiss)	
	LC50: = 0.15 mg/L, 96h static	
	(Lepomis macrochirus)	
	LC50: 0.0712 - 0.0936 mg/L,	
	96h flow-through (Pimephales	
	promelas)	
	LC50: = 0.17 mg/L, 96h static	
	(Pimephales promelas)	
	LC50: 0.066 - 0.0852 mg/L, 96h	
	flow-through (Lepomis	
	macrochirus)	
Sodium hydroxide	LC50: = 45.4 mg/L, 96h static	
	(Oncorhynchus mykiss)	

Component	Microtox	M-Factor
Sodium cyanide		10

12.2. Persistence and degradability Expected to be biodegradable

Persistence

Soluble in water, Persistence is unlikely, based on information available.

Degradability

Not relevant for inorganic substances.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Sodium cyanide	-0.44	No data available

12.4. Mobility in soil The product is water soluble, and may spread in water systems Will likely be mobile in the

environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB

assessment

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not

require assessment.

12.6. Endocrine disrupting

properties

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused

Products

Should not be released into the environment. Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in

accordance with local regulations.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Do not flush to sewer. Waste codes should be assigned by the user based on the Other Information

application for which the product was used. Do not empty into drains. Do not let this

chemical enter the environment.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number UN1689

14.2. UN proper shipping name SODIUM CYANIDE, SOLID

14.3. Transport hazard class(es) 6.1 14.4. Packing group

<u>ADR</u>

14.1. UN number UN1689

14.2. UN proper shipping name SODIUM CYANIDE, SOLID

14.3. Transport hazard class(es) 6.1 14.4. Packing group I

IATA

<u>14.1. UN number</u> UN1689

14.2. UN proper shipping name SODIUM CYANIDE, SOLID

14.3. Transport hazard class(es) 6.1 14.4. Packing group I

14.5. Environmental hazards Dangerous for the environment

Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user No special precautions required.

<u>14.7. Maritime transport in bulk</u> Not applicable, packaged goods <u>according to IMO instruments</u>

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Sodium cyanide	143-33-9	205-599-4	-	-	X	X	KE-31401	X	X
Sodium hydroxide	1310-73-2	215-185-5	-	-	Х	X	KE-31487	X	Х

С	omponent	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Soc	dium cyanide	143-33-9	Х	ACTIVE	X	-	X	Х	Х
Sodi	um hydroxide	1310-73-2	Х	ACTIVE	Х	-	X	Х	Х

Legend: X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

- 1					
	Component	L CAS No	REACH (1907/2006) -	REACH (1907/2006) -	REACH Regulation (EC
	Component	0710110	` ,	` ,	
			Annex XIV - Substances	Annex XVII - Restrictions	1907/2006) article 59 -

Revision Date 04-Mar-2024

Sodium cyanide

Subject to Authorization on Certain Dangerous **Candidate List of** Substances Substances of Very High Concern (SVHC) Sodium cyanide 143-33-9 Use restricted. See item 75. (see link for restriction details) Sodium hydroxide 1310-73-2 Use restricted. See item 75. (see link for restriction details)

REACH links

https://echa.europa.eu/substances-restricted-under-reach

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
		Qualifying Quantities for Major Accident	Qualifying Quantities for Safety Report
		Notification	Requirements
Sodium cyanide	143-33-9	Not applicable	Not applicable
Sodium hydroxide	1310-73-2	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification See table for values

Component Germany - Water Classification (AwSV)		Germany - TA-Luft Class
Sodium cyanide	WGK3	
Sodium hydroxide	WGK1	

	Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Γ	Sodium hydroxide	Prohibited and Restricted		
L	1310-73-2 (0.3-0.8)	Substances		

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H300 - Fatal if swallowed

H310 - Fatal in contact with skin

H330 - Fatal if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H372 - Causes damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

EUH032 - Contact with acids liberates very toxic gas

Legend

CAS - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances **ENCS** - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50% POW - Partition coefficient Octanol:Water vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from

Ships

ATE - Acute Toxicity Estimate VOC - (Volatile Organic Compound)

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

Creation Date 24-Apr-2023 04-Mar-2024 **Revision Date**

SDS sections updated. **Revision Summary**

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

Disclaimer

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

End of Safety Data Sheet