

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

Creation Date 15-Oct-2009

Revision Date 24-Jan-2024

**Revision Number** 3

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

### 1.1. Product identifier

Product Description:	Tin(II) chloride, anhydrous
Cat No. :	35723
Synonyms	Stannous chloride
CAS No	7772-99-8
EC No	231-868-0
Molecular Formula	Cl2 Sn
REACH registration number	-
-	

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

Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

### 1.3. Details of the supplier of the safety data sheet

Company	Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608
E-mail address	begel.sdsdesk@thermofisher.com
1.4. Emergency telephone number	For information <b>US</b> call: 001-800-227-6701 / <b>Europe</b> call: +32 14 57 52 11 Emergency Number <b>US:</b> 001-201-796-7100 / <b>Europe:</b> +32 14 57 52 99 <b>CHEMTREC</b> Tel. No. <b>US:</b> 001-800-424-9300 / <b>Europe:</b> 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

Substances/mixtures corrosive to metal

Category 1 (H290)

### Tin(II) chloride, anhydrous

### Health hazards

Acute oral toxicity Acute Inhalation Toxicity - Dusts and Mists Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation Skin Sensitization Specific target organ toxicity - (single exposure) Specific target organ toxicity - (repeated exposure)

### **Environmental hazards**

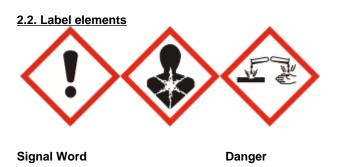
Chronic aquatic toxicity

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Category 4 (H302) Category 4 (H332) Category 1 B (H314) Category 1 (H318) Category 1 (H317) Category 3 (H335) Category 2 (H373)

Category 3 (H412)

### Full text of Hazard Statements: see section 16



#### **Hazard Statements**

- H290 May be corrosive to metals
- H314 Causes severe skin burns and eye damage
- H317 May cause an allergic skin reaction
- H335 May cause respiratory irritation
- H373 May cause damage to organs through prolonged or repeated exposure
- H412 Harmful to aquatic life with long lasting effects
- H302 + H332 Harmful if swallowed or if inhaled

#### **Precautionary Statements**

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

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

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

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

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

### 2.3. Other hazards

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

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - According to
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### Tin(II) chloride, anhydrous

### Revision Date 24-Jan-2024

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				GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Stannous chloride	7772-99-8	EEC No. 231-868-0	>95	Met. Corr. 1 (H290) Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Sens. 1 (H317) Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335) STOT RE 2 (H373) Aquatic Chronic 3 (H412)

### **REACH** registration number

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	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. 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.
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
	Causes burns by all exposure routes. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
4.3. Indication of any immediate me	edical attention and special treatment needed
Notes to Physician	Treat symptomatically.

### SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

### Tin(II) chloride, anhydrous

### Extinguishing media which must not be used for safety reasons No information available.

#### 5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes.

#### **Hazardous Combustion Products**

Hydrogen chloride gas.

#### 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

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

#### 6.2. Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

#### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

#### 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. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store in metal containers. Corrosives area. Store under an inert atmosphere.

#### Technical Rules for Hazardous Substances (TRGS) 510 Class 8B Storage Class (LGK) (Germany)

### 7.3. Specific end use(s)

Use in laboratories

### 8.1. Control parameters

### Exposure limits

List source(s): UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

Component	The United Kingdom	European Union	Ireland
Stannous chloride	STEL: 4 mg/m <sup>3</sup> 15 min		
	TWA: 2 mg/m <sup>3</sup> 8 hr		

### 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	Acute effects	Chronic effects local	Chronic effects
	(Dermal)	systemic (Dermal)	(Dermal)	systemic (Dermal)
Stannous chloride 7772-99-8 ( >95 )		DNEL = 0.69mg/kg bw/day		DNEL = 0.34mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Stannous chloride 7772-99-8 ( >95 )	DNEL = 12.84mg/m <sup>3</sup>	$DNEL = 2.01 \text{mg/m}^3$	DMEL = 12mg/m <sup>3</sup>	DNEL = 1mg/m <sup>3</sup>

### Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water		Water Intermittent	Microorganisms in	,
		sediment		sewage treatment	
Stannous chloride	PNEC = 0.8mg/L	PNEC =	PNEC = 4.24µg/L	PNEC = 1.06ng/L	
7772-99-8 (>95)		51.37mg/kg	-		
		sediment dw			

### 8.2. Exposure controls

### **Engineering Measures**

Use only under a chemical fume hood. 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 equ Eye Protection		Goggles (European standard - EN 166)		
Hand Protection	Protectiv	e gloves		
Glove material Natural rubber Nitrile rubber Neoprene PVC	Breakthrough time See manufacturers recommendations	Glove thickness -	EU standard EN 374	Glove comments (minimum requirement)

### Skin and body protection Long sleeved clothing.

Inspect gloves before 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)

### Tin(II) chloride, anhydrous

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 <b>Recommended Filter type:</b> Particulates filter conforming to EN 143
Small scale/Laboratory use	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. <b>Recommended half mask:-</b> 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 Odor Odor Threshold Melting Point/Range Softening Point Boiling Point/Range Flammability (liquid) Flammability (solid,gas) Explosion Limits	White Slight No data available 246 °C / 474.8 °F No data available 652 °C / 1205.6 °F Not applicable No information available No data available	@ 760 mmHg Solid
Flash Point Autoignition Temperature Decomposition Temperature pH Viscosity Water Solubility Solubility in other solvents Partition Coefficient (n-octanol/wat Vapor Pressure Density / Specific Gravity	negligible 3.950	<b>Method -</b> No information available 10% in water Solid
Bulk Density Vapor Density Particle characteristics	No data available Not applicable No data available	Solid
9.2. Other information		
Molecular Formula Molecular Weight Evaporation Rate	Cl2 Sn 189.6 Not applicable - Solid	

10.1. Reactivity	None known, based on information available Strong reducing agent. Fire and explosion risk in contact with oxidizing agents
10.2. Chemical stability	Hygroscopic. Air sensitive. Strong reducing agent. Fire and explosion risk in contact with oxidizing agents.
10.3. Possibility of hazardous rea	actions_
Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. None under normal processing.
<u>10.4. Conditions to avoid</u>	Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water. Exposure to air.
10.5. Incompatible materials	Strong oxidizing agents. Peroxides. Alkali metals Nitrates. Ethylene oxide.
10.6 Hazardaus desembosition	araduata

<u>10.6. Hazardous decomposition products</u> Hydrogen chloride gas.

# SECTION 11: TOXICOLOGICAL INFORMATION

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

**Product Information** 

Tin(II) chloride, anhydrous

(a) acute toxicity;

OralCategory 4DermalNo data availableInhalationCategory 4

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Stannous chloride	LD50 = 1910 mg/kg ( Rat )	-	LC50 = 2mg/l (4h) rat (OECD
			436)

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization; Respiratory Skin No data available Category 1

May cause sensitization by skin contact

(e) germ cell mutagenicity; No data available

Component	Test method	Test species	Study result
Stannous chloride	OECD Test Guideline 476	in vitro	negative
7772-99-8 ( >95 )	Gene cell mutation	Mammalian	-

(f) carcinogenicity;

No data available

[	Component	Test method	Test species / Duration	Study result
Ī	Stannous chloride	OECD Test Guideline 451	Rat	negative
	7772-99-8 (>95)		mouse	
			2 years	

### There are no known carcinogenic chemicals in this product

Component     Test method     Test species / Duration     Study result       Stannous chloride     OECD Test Guideline similar to OECD 416     rabbit 15 days     NOREL = 41.5 mg/kg bw/day       (h) STOT-single exposure;     Category 3       Results / Target organs     Respiratory system.       (i) STOT-repeated exposure;     Category 2       Target Organs     Central Vascular System (CVS), Blood.       (j) aspiration hazard;     Not applicable Solid       Symptoms / effects,both acute and delayed     Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pair, muscle pain or flushing. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Prosible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.       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.       12.1. Toxicity     The product contains following substances which are hazardous for the environment. Contains a substance which is Harmful to aquatic organisms, may cause long-term adverse effects in the aquate environment.       Component     Freshwater Fish     Water Flea     Freshwater Algae </th <th>(g) reproductive toxicity;</th> <th>No data available</th> <th></th> <th></th>	(g) reproductive toxicity;	No data available		
TTT2-99-8 (>95)   OECD 416   15 days   41.5 mg/kg bw/day     (h) STOT-single exposure;   Category 3     Results / Target organs   Respiratory system.     (i) STOT-repeated exposure;   Category 2     Target Organs   Central Vascular System (CVS), Blood.     (j) aspiration hazard;   Not applicable Solid     Symptoms / effects,both acute and delayed   Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing. Product is a corrosive material. Use of gastric layage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.     11.2. Information on other hazards   Endocrine Disrupting Properties     Endocrine Disrupting Properties   Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.     I2.1. Toxicity   The product contains following substances which are hazardous for the environment. Contains a substance which is:. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.     Component   Freshwater Fish   Water Fiea   Freshwater Algae	Component	Test method	Test species / Duration	
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Solid     Symptoms / effects,both acute and delayed   Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.     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 effects     The product contains following substances which are hazardous for the environment. Contains a substance which is:. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.     Component   Freshwater Fish   Water Flea   Freshwater Algae				
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Component Freshwater Fish Water Flea Freshwater Algae				is, may cause long-term
		adverse effects in the aquatic e	environment.	
Stannous chloride EC50 = 19.5 mg/L/48h		Freshwater Fish		Freshwater Algae
	Stannous chloride		EC50 = 19.5 mg/L/48h	

<u>12.2. Persistence and degradability</u> Persistence Degradability Degradation in sewage treatment plant	Soluble in water, Persistence is unlikely, based on information available. Not relevant for inorganic substances. Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.
12.3. Bioaccumulative potential	Bioaccumulation is unlikely
<u>12.4. Mobility in soil</u>	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
<u>12.5. Results of PBT and vPvB</u> assessment	In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment.

### <u>12.6. Endocrine disrupting</u> 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.
Other Information	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Solutions with low pH-value must be neutralized before discharge. Do not let this chemical enter the environment. Large amounts will affect pH and harm aquatic organisms.

### **SECTION 14: TRANSPORT INFORMATION**

### IMDG/IMO

UN3260
Corrosive solid, acidic, inorganic, n.o.s.
Tin (II) Chloride
8
III

<u>ADR</u>

<u>14.1. UN number</u>	UN3260
14.2. UN proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.
Technical Shipping Name	Tin (II) Chloride
14.3. Transport hazard class(es)	8
14.4. Packing group	III

<u>IATA</u>

<u>14.1. UN number</u>	UN3260
14.2. UN proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.
Technical Shipping Name	Tin (II) Chloride
14.3. Transport hazard class(es)	8
14.4. Packing group	III

**<u>14.5. Environmental hazards</u>** No hazards identified

**<u>14.6. Special precautions for user</u>** No special precautions required.

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

### **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
Stannous chloride	7772-99-8	231-868-0	-	-	Х	Х	KE-33845	Х	Х
Component	CAS No	TSCA	notific	ventory ation -	DSL	NDSL	AICS	NZIoC	PICCS
			Active-	nactive					
Stannous chloride	7772-99-8	Х	ACT	IVE	Х	-	Х	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

Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	· · · · · · · · · · · · · · · · · · ·	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Stannous chloride	7772-99-8	-	-	-

### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report	
		Notification	Requirements	
Stannous chloride	7772-99-8	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 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

#### **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
Stannous chloride	WGK3	

#### 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

H290 - May be corrosive to metals

H302 - Harmful if swallowed

H332 - Harmful if inhaled

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H412 - Harmful to aquatic life with long lasting effects

#### Legend

**CAS** - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemic 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

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

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

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 incident response training.

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.

Prepared By	Health, Safety and Environmental Department
Creation Date	15-Oct-2009
Revision Date	24-Jan-2024
Revision Summary	New emergency telephone response service provider.

**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/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

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

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)

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

Disclaimer

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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