

according to Regulation (EC) No. 1907/2006

Creation Date 01-Jun-2010 Revision Date 22-Mar-2024 Revision Number 2

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

#### 1.1. Product identifier

Product Description: Selenium metal shot, 99.995% min. (metals basis) approx 8 mesh

Cat No. : 99589 Synonyms None

 Index No
 034-001-00-2

 CAS No
 7782-49-2

Molecular Formula Se 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

Thermo Fisher (Kandel) GmbH

Erlenbachweg 2, 76870 Kandel, Germany

Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300

**Swiss distributor -** Fisher Scientific AG Neuhofstrasse 11, CH 4153 Reinach

Tel: +41 (0) 56 618 41 11

https://www.fishersci.ch/ch/en/customer-help-

support/forms/email-us.html

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

customers in Switzerland:

Tox Info Suisse Emergency Number: 145 (24hr)

Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)

Chemtrec (24h) Toll-Free: 0800 564 402 Chemtrec Local: +41-43 508 20 11 (Zurich)

## **SECTION 2: HAZARDS IDENTIFICATION**

## 2.1. Classification of the substance or mixture

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#### CLP Classification - Regulation (EC) No 1272/2008

#### **Physical hazards**

Based on available data, the classification criteria are not met

#### **Health hazards**

Acute oral toxicity

Acute Inhalation Toxicity - Dusts and Mists

Specific target organ toxicity - (repeated exposure)

Category 3 (H301)

Category 3 (H331)

Category 2 (H373)

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Chronic aquatic toxicity Category 4 (H413)

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



#### Signal Word

#### Danger

#### **Hazard Statements**

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

H413 - May cause long lasting harmful effects to aquatic life

H301 + H331 - Toxic if swallowed or if inhaled

#### **Precautionary Statements**

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P273 - Avoid release to the environment

#### 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

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Selenium	7782-49-2	EEC No. 231-957-4	> 99.5	Acute Tox. 3 (H331)

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		Acute Tox. 3 (H301)
		STOT RE 2 (H373)
		Aquatic Chronic 4 (H413)

#### REACH registration number

Full text of Hazard Statements: see section 16

## **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

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

Immediate medical attention is required.

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. 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. If

not breathing, give artificial respiration.

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

No information available.

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

Notes to Physician Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

## 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

#### Extinguishing media which must not be used for safety reasons

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Toxic fumes.

#### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full

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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. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Avoid dust formation.

#### 6.2. Environmental precautions

Should not be released into the environment.

#### 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

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

#### **Hygiene Measures**

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

Keep containers tightly closed in a dry, cool and well-ventilated place.

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

Storage Class/LGK 6.1D

Switzerland - Storage of hazardous substances

Storage class - SC 6.1

https://www.kvu.ch/de/themen/stoffe-und-produkte https://www.kvu.ch/fr/themes/substances-et-produits https://www.kvu.ch/it/temi/sostanze-e-prodotti

## 7.3. Specific end use(s)

Use in laboratories

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1. Control parameters

#### **Exposure limits**

List source(s): **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE -** 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** -

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The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
Selenium		STEL: 0.3 mg/m <sup>3</sup> 15 min TWA: 0.1 mg/m <sup>3</sup> 8 hr		TWA: 0.2 mg/m <sup>3</sup> 8 uren	TWA / VLA-ED: 0.1 mg/m³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Selenium		TWA: 0.05 mg/m <sup>3</sup> (8	TWA: 0.2 mg/m <sup>3</sup> 8 horas		TWA: 0.1 mg/m <sup>3</sup> 8
		Stunden). AGW -			tunteina
		exposure factor 1			STEL: 0.3 mg/m <sup>3</sup> 15
		TWA: 0.02 mg/m <sup>3</sup> (8			minuutteina
		Stunden). MAK			
		Höhepunkt: 0.16 mg/m <sup>3</sup>			
		Haut			

Component	Austria	Denmark	Switzerland	Poland	Norway
Selenium	MAK-KZGW: 0.3 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> 8 timer	Haut/Peau	STEL: 0.3 mg/m <sup>3</sup> 15	TWA: 0.05 mg/m <sup>3</sup> 8
	15 Minuten	STEL: 0.2 mg/m <sup>3</sup> 15	STEL: 0.16 mg/m <sup>3</sup> 15	minutach	timer
	MAK-TMW: 0.1 mg/m <sup>3</sup> 8	minutter	Minuten	TWA: 0.1 mg/m <sup>3</sup> 8	STEL: 0.15 mg/m <sup>3</sup> 15
	Stunden		TWA: 0.02 mg/m <sup>3</sup> 8	godzinach	minutter. value
			Stunden		calculated

	Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Γ	Selenium	TWA: 0.2 mg/m <sup>3</sup>	TWA-GVI: 0.1 mg/m <sup>3</sup> 8	TWA: 0.1 mg/m <sup>3</sup> 8 hr.		TWA: 0.1 mg/m <sup>3</sup> 8
			satima.	Se		hodinách.
L				STEL: 0.3 mg/m <sup>3</sup> 15 min		Ceiling: 0.2 mg/m <sup>3</sup>

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Selenium			TWA: 0.2 mg/m <sup>3</sup>		TWA: 0.1 mg/m <sup>3</sup> 8
					klukkustundum.
					Ceiling: 0.2 mg/m <sup>3</sup>

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Selenium		TWA: 0.1 mg/m <sup>3</sup> IPRD			TWA: 0.1 mg/m <sup>3</sup> 8 ore
		_			STEL: 0.2 mg/m <sup>3</sup> 15
					minute

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Selenium	TWA: 2 mg/m <sup>3</sup> 1830	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> 8	TLV: 0.1 mg/m <sup>3</sup> 8	
		_	urah inhalable fraction	timmar. NGV	
			STEL: 0.05 mg/m <sup>3</sup> 15		
			minutah inhalable		
			fraction		

#### **Biological limit values**

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

Component	European Union	United Kingdom	France	Spain	Germany
Selenium					Selenium: 150 µg/L
					serum (no restriction )

#### **Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

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

See table for values

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Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Selenium 7782-49-2 ( > 99.5 )				DNEL = 7mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Selenium 7782-49-2 ( > 99.5 )				$DNEL = 0.05 mg/m^3$

#### **Predicted No Effect Concentration (PNEC)**

See values below.

#### 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 equipment

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material Natural rubber Nitrile rubber Neoprene	Breakthrough time See manufacturers recommendations	Glove thickness	EU standard EN 374	Glove comments (minimum requirement)
PVC				

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) 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, gloves with care avoiding skin contamination.

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

appropriate certified respirators.

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

and maintained properly

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

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 Small scale/Laboratory use

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

No information available. **Environmental exposure controls** 

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Selenium metal shot, 99.995% min. (metals basis) approx 8 mesh

#### 9.1. Information on basic physical and chemical properties

**Physical State** Solid

**Appearance** Dark grey - Black Odor No information available **Odor Threshold** No data available

Melting Point/Range 220 - 222 °C / 428 - 431.6 °F

**Softening Point** No data available

690 °C / 1274 °F **Boiling Point/Range** Flammability (liquid) Not applicable

Solid

Flammability (solid,gas) No information available

**Explosion Limits** No data available

Flash Point No data available Method - No information available

**Autoignition Temperature** No data available **Decomposition Temperature** No data available No information available Hq

**Viscosity** Not applicable Solid

Water Solubility Insoluble in water Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

**Vapor Pressure** No information available

**Density / Specific Gravity** No data available **Bulk Density** No data available Not applicable

Solid **Vapor Density** 

**Particle characteristics** No data available

9.2. Other information

**Molecular Formula** Se **Molecular Weight** 78.96

**Evaporation Rate** Not applicable - Solid

## **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

10.4. Conditions to avoid

Excess heat. Avoid dust formation.

10.5. Incompatible materials

Strong oxidizing agents. oxygen. Fluorine. Acids.

10.6. Hazardous decomposition products

Toxic fumes.

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## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### **Product Information**

(a) acute toxicity;

OralCategory 3DermalNo data availableInhalationCategory 3

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Selenium	LD50 = 6700 mg/kg (Rat)	-	>5.67 mg/l (Rat) 4hr

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

The table below indicates whether each agency has listed any ingredient as a carcinogen

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 2

Target Organs None known.

(j) aspiration hazard; Not applicable

Solid

Symptoms / effects,both acute and No information available. delayed

#### 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

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**Ecotoxicity effects** 

Component	Freshwater Fish	Water Flea	Freshwater Algae
Selenium	LC50: > 100 mg/L, 96h semi-static (Oncorhynchus mykiss)		

12.2. Persistence and degradability

Persistence Insoluble in water.

**Degradability** Not relevant for inorganic substances.

**12.3. Bioaccumulative potential** May have some potential to bioaccumulate

12.4. Mobility in soil Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water

solubility.

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** 

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 Waste codes should be assigned by the user based on the application for which the product

was used. Do not empty into drains.

Switzerland - Waste Ordinance Disposal should be in accordance with applicable regional, national and local laws and

regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance,

ADWO) SR 814.600

https://www.fedlex.admin.ch/eli/cc/2015/891/en

## **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

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UN3283 14.1. UN number

14.2. UN proper shipping name SELENIUM COMPOUND, SOLID, N.O.S.

**Technical Shipping Name** Selenium metal

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

6.1

ADR

14.1. UN number UN3283

14.2. UN proper shipping name SELENIUM COMPOUND, SOLID, N.O.S.

**Technical Shipping Name** Selenium metal

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

IATA

14.1. UN number UN3283

14.2. UN proper shipping name SELENIUM COMPOUND, SOLID, N.O.S.

**Technical Shipping Name** Selenium metal

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

No hazards identified 14.5. Environmental hazards

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk Not applicable, packaged goods

according to IMO instruments

## **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
Selenium	7782-49-2	231-957-4	ı	-	X	X	KE-30924	Χ	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Selenium	7782-49-2	Х	ACTIVE	Х	-	X	X	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

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)
Selenium	7782-49-2	-	Use restricted. See item 75. (see link for restriction details)	-

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#### **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
Selenium	7782-49-2	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 .

#### **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
Selenium	WGK2	Class II: 0.5 mg/m³ (Massenkonzentration)

Component	France - INRS (Tables of occupational diseases)
Selenium	Tableaux des maladies professionnelles (TMP) - RG 75

#### **Swiss Regulations**

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

#### 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

H301 - Toxic if swallowed H331 - Toxic if inhaled

#### 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/EU List of Notified Chemical Substances

Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

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TWA - Time Weighted Average

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

LD50 - Lethal Dose 50%

**Transport Association** 

ATE - Acute Toxicity Estimate

VOC - (volatile organic compound)

IARC - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

ICAO/IATA - International Civil Aviation Organization/International Air

MARPOL - International Convention for the Prevention of Pollution from

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

Ships

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.

Health, Safety and Environmental Department Prepared By

**Creation Date** 01-Jun-2010 22-Mar-2024 **Revision Date** 

**Revision Summary** New emergency telephone response service provider.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

#### **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**