

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

Creation Date 21-Jan-2011 Revision Date 12-Feb-2024 Revision Number 4

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

#### 1.1. Product identifier

Product Description: Potassium cyanide

Cat No.: 12136

**Synonyms** Cyanide of potassium; Hydrocyanic acid, potassium salt; KCN.

 Index No
 006-007-00-5

 CAS No
 151-50-8

 EC No
 205-792-3

 Molecular Formula
 C K N

 REACH registration number

#### 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

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 **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** 

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Substances/mixtures corrosive to metal Category 1 (H290)

#### **Health hazards**

Acute oral toxicity

Acute dermal toxicity

Acute Inhalation Toxicity - Dusts and Mists

Specific target organ toxicity - (repeated exposure)

Category 1 (H300)

Category 1 (H310)

Category 1 (H330)

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

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

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

P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water

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

P310 - Immediately call a POISON CENTER or doctor/physician

P405 - Store locked up

#### 2.3. Other hazards

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

Toxic to terrestrial invertebrates

Toxicity to Soil Dwelling Organisms

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

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

Potassium cyanide Revision Date 12-Feb-2024

#### 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
Potassium cyanide	151-50-8	EEC No. 205-792-3	>95	Met. Corr. 1 (H290) Acute Tox. 1 (H300) Acute Tox. 1 (H310) Acute Tox. 1 (H330) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) EUH032

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Potassium cyanide	-	10	-

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 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 Treat as cyanide poisoning.

## **SECTION 5: FIREFIGHTING MEASURES**

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#### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

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

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

Carbon dioxide (CO<sub>2</sub>). Do not use water or foam.

#### 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), Potassium oxides.

## 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.

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

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

Keep in suitable, closed containers for disposal: Prevent contact with water. Do NOT use water for clean-up: Use personal protective equipment as required

#### 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

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. 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.

#### **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

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Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep locked up. Keep away from acids. Keep away from combustible material. Do not store in aluminum containers.

Class 6.1B

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

#### 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, Fourth edition. Published 2020. **IRE -** 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

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

Cor	nponent	The United Kingdom	European Union	Ireland
Potass	ium cyanide	STEL: 5 mg/m <sup>3</sup> 15 min	TWA: 1 mg/m <sup>3</sup> (8h)	TWA: 1 mg/m <sup>3</sup> 8 hr.
	-	TWA: 1 mg/m <sup>3</sup> 8 hr	STEL: 5 mg/m <sup>3</sup> (15min)	STEL: 5 mg/m <sup>3</sup> 15 min
		Skin	Skin	Skin

#### **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)
Potassium cyanide 151-50-8 ( >95 )		DNEL = 4.03mg/kg bw/day		DNEL = 0.14mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Potassium cyanide 151-50-8 ( >95 )		DNEL = 12.5mg/m <sup>3</sup>		$DNEL = 0.94 mg/m^3$

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

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Potassium cyanide	$PNEC = 1\mu g/L$	PNEC = 4µg/kg	PNEC = $3.2\mu g/L$	$PNEC = 50\mu g/L$	PNEC = 7µg/kg soil
151-50-8 ( >95 )		sediment dw			dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Potassium cyanide	$PNEC = 0.2\mu g/L$	PNEC = 0.8µg/kg			

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15	51-50-8 ( >95 )	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 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 Level 3	As tested under EN374-3 Determination of
				Resistance to Permeation by Chemicals

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)

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

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.

**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.

Solid

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

Physical State Powder Solid

Appearance White

Odor bitter almonds
Odor Threshold No data available
Melting Point/Range 634 °C / 1173.2 °F
Softening Point
Boiling Point/Range 1625 °C / 2957 °F

Flammability (liquid) Not applicable

Flammability (solid,gas)

No information available

Explosion Limits No data available

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Method - No information available

Autoignition Temperature Not applicable

**Decomposition Temperature** No data available

**pH** 11-12 20 g/l aq.sol.(20°C) **Viscosity** Not applicable Solid

No information available

Viscosity Not applicable Water Solubility 400 g/L (20°C)

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Vapor PressureNo data availableDensity / Specific Gravity1.52 @ 16°CBulk DensityNo data availableVapor DensityNot applicable

Particle characteristics No data available

9.2. Other information

**Flash Point** 

Molecular Formula C K N Molecular Weight 65.12

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

Moisture sensitive.

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. Burning produces obnoxious and toxic fumes. Incompatible products.

Solid

Exposure to light. Exposure to moist air or water. Exposure to air.

10.5. Incompatible materials

Acids. Strong oxidizing agents. Bases. Finely powdered metals. Aldehydes. Peroxides.

Metals.

10.6. Hazardous decomposition products

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

**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

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#### Potassium cyanide

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium cyanide	LD50 = 7.49 mg/kg (Rat)	LD50 = 22.3 mg/kg ( Rabbit )	LC50 = 0.16 mg/L (Rat) 1 h

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

Respiratory Skin

Based on available data, the classification criteria are not met Based on available data, the classification criteria are not met

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

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

There are no known carcinogenic chemicals in this product

(q) 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

Heart, Thyroid, Cardiovascular system, Central nervous system (CNS). **Target Organs** 

Not applicable (j) aspiration hazard;

Solid

delayed

Symptoms / effects,both acute and 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.

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

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

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

environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Potassium cyanide	LC50: 0.31 - 0.37 mg/L, 96h		
	static (Pimephales promelas)		
	LC50: = 0.0588 mg/L, 96h		
	flow-through (Poecilia reticulata)		

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LC50: 0.45 - 0.57 mg/L, 96h	
flow-through (Lepomis	
macrochirus)	
LC50: = 0.45  mg/L, 96h	
(Lepomis macrochirus)	
LC50: 0.01 - 0.08 mg/L, 96h	
static (Lepomis macrochirus)	
LC50: 0.044 - 0.084 mg/L, 96h	
static (Oncorhynchus mykiss)	
LC50: 0.04 - 0.046 mg/L, 96h	
flow-through (Oncorhynchus	
mykiss)	
,,	

Component	Microtox	M-Factor
Potassium cyanide		10

12.2. Persistence and degradability

treatment plant

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

**Degradability** Not relevant for inorganic substances.

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

water treatment plants.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

**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.

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. Do not let this

chemical enter the environment.

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## **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

14.1. UN number UN1680

POTASSIUM CYANIDE, SOLID 14.2. UN proper shipping name

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

ADR

14.1. UN number UN1680

14.2. UN proper shipping name POTASSIUM CYANIDE, SOLID

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

IATA

UN1680 14.1. UN number

POTASSIUM CYANIDE, SOLID 14.2. UN proper shipping name

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

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.

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
Potassium cyanide	151-50-8	205-792-3	-	-	X	X	KE-29092	Х	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Potassium cyanide	151-50-8	Х	ACTIVE	Х	-	Χ	Х	X

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) -	REACH (1907/2006) -	REACH Regulation (EC
-		Annex XIV - Substances	Annex XVII - Restrictions	1907/2006) article 59 -
		Subject to Authorization	on Certain Dangerous	Candidate List of

#### Potassium cyanide

			Substances	Substances of Very High Concern (SVHC)
Potassium cyanide	151-50-8	-	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
Potassium cyanide	151-50-8	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 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
Potassium cyanide	WGK3	

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) is not required (< 10 t/y)

## **SECTION 16: OTHER INFORMATION**

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

H290 - May be corrosive to metals

H300 - Fatal if swallowed

H310 - Fatal in contact with skin

H330 - Fatal if inhaled

H372 - Causes damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

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H410 - Very toxic to aquatic life with long lasting effects EUH032 - Contact with acids liberates very toxic gas

#### Legend

Substances List

**CAS** - Chemical Abstracts Service

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

ICAO/IATA - International Civil Aviation Organization/International Air

MARPOL - International Convention for the Prevention of Pollution from

**ENCS** - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

IARC - International Agency for Research on Cancer

NZIoC - New Zealand Inventory of Chemicals

Predicted No Effect Concentration (PNEC)

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

EC50 - Effective Concentration 50%

TWA - Time Weighted Average

LD50 - Lethal Dose 50%

Transport Association

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

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

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

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

Key literature references and sources for data

## **Training Advice**

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

Shins

Chemical incident response training.

**Prepared By** Health, Safety and Environmental Department

**Creation Date** 21-Jan-2011 **Revision Date** 12-Feb-2024

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

## 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**