

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

Revision Date 25-Jan-2024

**Revision Number** 4

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

### 1.1. Product identifier

Product Description:	Cadmium foil
Cat No. :	44127
Index No	048-002-00-0
CAS No	7440-43-9
EC No	231-152-8
Molecular Formula	Cd
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

Based on available data, the classification criteria are not met

#### Health hazards

### **Cadmium foil**

Acute Inhalation Toxicity - Dusts and Mists Germ Cell Mutagenicity Carcinogenicity Reproductive Toxicity Specific target organ toxicity - (repeated exposure)

### **Environmental hazards**

Acute aquatic toxicity Chronic aquatic toxicity Category 2 (H330) Category 2 (H341) Category 1B (H350) Category 2 (H361fd) Category 1 (H372)

Category 1 (H400) Category 1 (H410)

Full text of Hazard Statements: see section 16



Signal Word

Danger

### Hazard Statements

H330 - Fatal if inhaled
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects
May form combustible dust concentrations in air

### **Precautionary Statements**

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P310 - Immediately call a POISON CENTER or doctor/physician P280 - Wear protective gloves/protective clothing/eye protection/face protection

### Additional EU labelling

Restricted to professional users

#### 2.3. Other hazards

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

May form explosible dust-air mixture if dispersed 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**

### 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
Cadmium	7440-43-9	EEC No. 231-152-8	100	Acute Tox. 2 (H330)

Cadmium foil

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	Muta. 2 (H341) Carc. 1B (H350) Repr. 2 (H361fd) STOT RE 1 (H372) Aquatic Acute 1 (H400)
	Aquatic Actie 1 (11400) Aquatic Chronic 1 (H410)

	Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Ī	Cadmium	-	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	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. 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
	None reasonably foreseeable. Kidney disorders: May cause harm to the unborn child: Blood disorders
4.3. Indication of any immediate me	dical attention and special treatment needed
Notes to Physician	Treat symptomatically.
	SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

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

### **Cadmium foil**

Thermal decomposition can lead to release of irritating gases and vapors. Fine dust dispersed in air may ignite. Dust can form an explosive mixture with air. Pyrophoric properties of solids and liquids. Do not allow run-off from fire-fighting to enter drains or water courses.

### **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 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

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

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. 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**

When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes or clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere.

## Technical Rules for Hazardous Substances (TRGS) 510Class 6.1BStorage Class (LGK) (Germany)Class 6.1B

7.3. Specific end use(s)

Use in laboratories

### **Cadmium foil**

### 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

Component	The United Kingdom	European Union	Ireland
Cadmium	STEL: 0.075 mg/m <sup>3</sup> 15 min	TWA: 0.001 mg/m <sup>3</sup> (8h)	TWA: 0.001 mg/m <sup>3</sup> 8 hr.
	TWA: 0.025 mg/m <sup>3</sup> 8 hr		inhalable fraction
	Carc. metal		TWA: 0.004 mg/m <sup>3</sup> 8 hr. limit
			value 0.004 mg/m <sup>3</sup> until 11
			July 2027 inhalable fraction
			STEL: 0.003 mg/m <sup>3</sup> 15 min
			STEL: 0.012 mg/m <sup>3</sup> 15 min

### **Biological limit values**

List source(s):

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

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Cadmium 7440-43-9(100)			DNEL = 4µg/m³	

### Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	-
Cadmium	PNEC = 0.19µg/L	PNEC = 1.8mg/kg		PNEC = 20µg/L	PNEC = 0.9mg/kg
7440-43-9 (100)	-	sediment dw			soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Cadmium	PNEC = 1.14µg/L	PNEC = 0.64mg/kg		PNEC = 0.16mg/kg	
7440-43-9 (100)		sediment dw		food	

#### 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 ProtectionWear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-		(minimum requirement)

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Nitrile rubber Neoprene PVC	recommendatio	ns	EN 374	
Skin and body prot	ection Lon	g sleeved clothing.		

Inspect gloves before use.

Cadmium foil

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 <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	Local authorities should be advised if significant spillages cannot be contained. Do not

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

allow material to contaminate ground water system. Prevent product from entering drains.

### 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	Silver Odorless No data available 321 °C / 609.8 °F No data available 765 °C / 1409 °F Not applicable No information available No data available	@ 760 mmHg Solid
Flash Point Autoignition Temperature Decomposition Temperature	No information available No data available No data available	Method - No information available
pH Viscosity Water Solubility Solubility in other solvents Partition Coefficient (n-octanol/wate	No information available Not applicable Insoluble No information available	Solid
Vapor Pressure Density / Specific Gravity Bulk Density Vapor Density Particle characteristics	No information available 8.64 @ 25°C No data available Not applicable No data available	Solid

9.2. Other information

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Cadmium foil

Molecular Formula Molecular Weight Evaporation Rate Cd 112.40 Not applicable - Solid

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Yes

10.2. Chemical stability

Stable under recommended storage conditions. Moisture sensitive. Air sensitive.

10.3. Possibility of hazardous reactions
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Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. None under normal processing.
10.4. Conditions to avoid	Incompatible products. Excess heat. Avoid dust formation. Exposure to air or moisture over prolonged periods.
10.5. Incompatible materials	Strong oxidizing agents. Strong acids. Sulfur oxides.

10.6. Hazardous decomposition products

Toxic fumes.

**SECTION 11: TOXICOLOGICAL INFORMATION** 

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

### **Product Information**

(a) acute toxicity;	
Oral	Based on available data, the classification criteria are not met
Dermal	No data available
Inhalation	Category 2

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cadmium	LD50 = 2330 mg/kg ( Rat )	-	LC50 = 25 mg/m <sup>3</sup> (Rat) 30 min

(b) skin corrosion/irritation;	No data available
(c) serious eye damage/irritation;	No data available
(d) respiratory or skin sensitization; Respiratory Skin	No data available No data available
(e) germ cell mutagenicity;	Category 2 Possible risk of irreversible effects
(f) carcinogenicity;	Category 1B

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

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Component	EU	UK	Germany	IARC
Cadmium	Carc Cat. 1B		Cat. 1	Group 1
Cadmium			Cat. 1	Group 1

(g) reproductive toxicity; Reproductive Effects	Category 2 Possible risk of impaired fertility. May cause harm to the unborn child.
(h) STOT-single exposure;	No data available
(i) STOT-repeated exposure;	Category 1
Target Organs	Blood, Respiratory system, Kidney, Prostate.
(j) aspiration hazard;	Not applicable Solid
Symptoms / effects,both acute and delayed	Kidney disorders. May cause harm to the unborn child. Blood disorders.

### 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. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Cadmium	LC50: 0.0004 - 0.003 mg/L, 96h (Pimephales promelas) LC50: = 0.016 mg/L, 96h (Oryzias latipes) LC50: = 21.1 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 0.24 mg/L, 96h static (Cyprinus carpio) LC50: = 4.26 mg/L, 96h semi-static (Cyprinus carpio) LC50: = 0.002 mg/L, 96h (Cyprinus carpio) LC50: = 0.006 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 0.003 mg/L, 96h flow-through (Oncorhynchus mykiss)	EC50: = 0.0244 mg/L, 48h Static (Daphnia magna)	

Component	Microtox	M-Factor
Cadmium		10

12.2. Persistence and degradability

Persistence Degradability Degradation in sewage treatment plant Insoluble in water.

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	May have some potential to bioaccumulate
<u>12.4. Mobility in soil</u>	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	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

**Ozone Depletion Potential** 

**Cadmium foil** 

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.

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

### IMDG/IMO

Not regulated

14.1. UN number14.2. UN proper shipping name14.3. Transport hazard class(es)14.4. Packing group

### <u>ADR</u>

Not regulated

14.1. UN number14.2. UN proper shipping name14.3. Transport hazard class(es)14.4. Packing group

<u>IATA</u>

Not regulated

14.1. UN number 14.2. UN proper shipping name

Cadmium foil

#### 14.3. Transport hazard class(es) 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 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

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Cadmium	7440-43-9	231-152-8	-	-	Х	Х	KE-04397	Х	-
Component	CAS No	TSCA	notific	ventory ation -	DSL	NDSL	AICS	NZIoC	PICCS
			Active-	Inactive					
Cadmium	7440-43-9	X	ACT	IVE	X	-	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

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Cadmium	7440-43-9	-	Use restricted. See item 72. (see link for restriction details) Use restricted. See item 23. (see link for restriction details) Use restricted. See item 28. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	SVHC Candidate list - 231-152-8 - Carcinogenic, Article 57a;Specific target organ toxicity after repeated exposure, Article 57(f) - human health

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

#### **REACH links**

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

https://echa.europa.eu/candidate-list-table

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

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
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		Qualifying Quantities for Major Accident Notification	Qualifying Quantities for Safety Report Requirements
Cadmium	7440-43-9	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

Component	ANNEX I - PART 1 List of chemicals subject to export notification procedure (referred to in Article 8)	ANNEX I - PART 2 List of chemicals qualifying for PIC notification (referred to in Article 11)	ANNEX I - PART 3 List of chemicals subject to the PIC procedure (referred to in Articles 13 and 14)
Cadmium 7440-43-9(100)	i(1) — industrial chemical for professional use sr — severe restriction i(2) — industrial chemical for public sr — severe restriction	i — industrial chemical sr — severe restriction	-

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012R0649&qid=1604065742303.

### 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

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

Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

#### 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
Cadmium	WGK3	Krebserzeugende Stoffe - Class I : 0.05 mg/m <sup>3</sup>
		(Massenkonzentration)

Component	France - INRS (Tables of occupational diseases)
Cadmium	Tableaux des maladies professionnelles (TMP) - RG 61,RG 61bis

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
Cadmium 7440-43-9(100)	Prohibited and Restricted Substances		Annex I - industrial chemical

### 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

H330 - Fatal if inhaled

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child

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

Key literature references and sources for data https://echa.europa.eu/information-on-chemicals

#### Legend

CAS - Chemical Abstracts Service	<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemica Substances/EU List of Notified Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances IECSC - Chinese Inventory of Existing Chemical Substances	
<b>KECL</b> - Korean Existing and Evaluated Chemical Substances	NZIOC - New Zealand Inventory of Chemicals
WEL - Workplace Exposure Limit	TWA - Time Weighted Average
ACGIH - American Conference of Governmental Industrial Hygienists	IARC - International Agency for Research on Cancer
DNEL - Derived No Effect Level	Predicted No Effect Concentration (PNEC)
RPE - Respiratory Protective Equipment	LD50 - Lethal Dose 50%
LC50 - Lethal Concentration 50%	EC50 - Effective Concentration 50%
NOEC - No Observed Effect Concentration	<b>POW</b> - Partition coefficient Octanol:Water
<b>PBT</b> - Persistent, Bioaccumulative, Toxic	vPvB - very Persistent, very Bioaccumulative
ADR - European Agreement Concerning the International Carriage of	ICAO/IATA - International Civil Aviation Organization/International Air
Dangerous Goods by Road	Transport Association
<b>IMO/IMDG</b> - International Maritime Organization/International Maritime	MARPOL - International Convention for the Prevention of Pollution from
Dangerous Goods Code	Ships
<b>OECD</b> - Organisation for Economic Co-operation and Development	ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor	VOC - (Volatile Organic Compound)

**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.

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

Prepared By	Health, Safety and Environmental Department
Revision Date	25-Jan-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

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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