

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

Creation Date 25-Jul-2018 Revision Date 20-Feb-2024 **Revision Number** 3

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

## 1.1. Product identifier

**Product Description:** Aluminum Cobalt powder

Cat No.: 88320

Molecular Formula Al:Co: 69:31 wt%

## 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 **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**

Substances/mixtures which, in contact with water, emit flammable gases

Category 2 (H261) Category 1 (H250)

Pyrophoric solids

## **Health hazards**

Respiratory Sensitization Category 1 Sub-category 1B (H334)

Skin Sensitization Category 1 (H317)

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#### **Aluminum Cobalt powder**

Germ Cell MutagenicityCategory 2 (H341)CarcinogenicityCategory 1B (H350)Reproductive ToxicityCategory 1B (H360F)

**Environmental hazards** 

Chronic aquatic toxicity Category 4 (H413)

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



## Signal Word

#### **Danger**

## **Hazard Statements**

H250 - Catches fire spontaneously if exposed to air

H261 - In contact with water releases flammable gases

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H360F - May damage fertility

H413 - May cause long lasting harmful effects to aquatic life

#### **Precautionary Statements**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P231 + P232 - Handle and store contents under inert gas. Protect from moisture

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

P302 + P335 + P334 - IF ON SKIN: Brush off loose particles from skin. Immerse in cool water

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

P284 - Wear respiratory protection

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

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P308 + P313 - IF exposed or concerned: Get medical advice/attention

## Additional EU labelling

Restricted to professional users

## 2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

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

## 3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - According to
				GB-CLP Regulations UK SI 2019/720 and
				UK SI 2020/1567

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#### **Aluminum Cobalt powder**

Aluminium	7429-90-5	EEC No. 231-072-3	69.0	Pyr. Sol. 1 (H250)
				Water-react. 2 (H261)
Cobalt	7440-48-4	EEC No. 231-158-0	31.0	Resp. Sens. 1B (H334) Skin Sens. 1 (H317) Muta.2 (H341) Repr. 1B (H360F) Carc. 1B (H350) Aquatic Chronic 4 (H413)

Full text of Hazard Statements: see section 16

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

#### 4.1. Description of first aid measures

**General Advice** If symptoms persist, call a physician.

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

medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. 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

## 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**

approved class D extinguishers. Do not use water or foam.

## 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**

Metal oxides, Hydrogen.

#### **Aluminum Cobalt powder**

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#### 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.

## **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.

#### 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. Keep in suitable, closed containers for disposal.

## 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. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

#### **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 container tightly closed in a dry and well-ventilated place.

**Technical Rules for Hazardous Substances (TRGS) 510** Class 4.2 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

- 1	Component	The United Kingdom	European Union	Ireland
- 1	Component	THE UTILEA KINGAUM	Lui Opeaii Oilloii	li Cialiu

#### **Aluminum Cobalt powder**

Aluminium	STEL: 30 mg/m³ 15 min STEL: 12 mg/m³ 15 min TWA: 10 mg/m³ 8 hr TWA: 4 mg/m³ 8 hr	TWA: 1 mg/m³ 8 hr. respirable fraction STEL: 3 mg/m³ 15 min
Cobalt	STEL: 0.3 mg/m³ 15 min TWA: 0.1 mg/m³ 8 hr Resp. Sens.	TWA: 0.02 mg/m <sup>3</sup> 8 hr. STEL: 0.3 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)
Cobalt 7440-48-4 ( 31.0 )			DNEL = 40µg/m³	

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

See values below.

	Component	Fresh water	Fresh water sediment	Microorganisms in sewage treatment	` ` ` '
	Aluminium 7429-90-5 ( 69.0 )			PNEC = 20mg/L	
Ī	Cobalt	PNEC = 0.62µg/L	PNEC = 53.8mg/kg	PNEC = 0.37mg/L	PNEC = 10.9mg/kg
١	7440-48-4 ( 31.0 )		sediment dw		soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Cobalt	$PNEC = 2.36 \mu g/L$	PNEC = 69.8mg/kg			
7440-48-4 ( 31.0 )		sediment dw			

## 8.2. Exposure controls

#### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

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	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	See manufacturers recommendations	-	EN 374	(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)

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.

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**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

Solid

and maintained properly

In case of insufficient ventilation, wear suitable respiratory equipment Large scale/emergency use

Recommended Filter type: Particle filter

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.

When RPE is used a face piece Fit Test should be conducted

No information available. **Environmental exposure controls** 

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

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

Solid **Physical State** 

Silver Grey **Appearance** Odorless Odor

**Odor Threshold** No data available **Melting Point/Range** No data available No data available **Softening Point Boiling Point/Range** No information available

Flammability (liquid) Not applicable

Flammability (solid,gas) No information available

**Explosion Limits** No data available

**Flash Point** No information available Method - No information available

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

Not applicable Solid **Viscosity** 

Insoluble **Water Solubility** 

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

log Pow Component

Cobalt

**Vapor Pressure** 23 hPa @ 20 °C **Density / Specific Gravity** No data available **Bulk Density** No data available

**Vapor Density** Not applicable Solid

**Particle characteristics** No data available

## 9.2. Other information

Molecular Formula Al:Co: 69:31 wt%

Burning rate or burning time = > 5 minutes and <= 10 minutes Flammable solids

Emitted gas ignites spontaneously

Substances/mixtures which, in

contact with water, emit flammable

gases

Not applicable - Solid **Evaporation Rate** 

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

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous PolymerizationNo information available.Hazardous ReactionsNone under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Metal oxides. Hydrogen.

## **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

DermalNo data availableInhalationNo data available

#### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminium	=	-	LC50 > 0.888 mg/L (Rat) 4 h
			- , ,
Cobalt	LD50 = 6171 mg/kg (Rat)	-	LC50 < 0.05 mg/L (Rat) 4 h
			<b>G</b> ( ,

(b) skin corrosion/irritation; No data available

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

(d) respiratory or skin sensitization;

**Respiratory** Sub Category 1B **Skin** Category 1

No information available

(e) germ cell mutagenicity; Category 2

(f) carcinogenicity; Category 1B

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

Component	EU	UK	Germany	IARC
Cobalt	Carc Cat. 1B		Cat. 2	Group 2A

(g) reproductive toxicity; Category 1B

(h) STOT-single exposure; No data available

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(i) STOT-repeated exposure; No data available

None known. **Target Organs** 

Not applicable (j) aspiration hazard;

Solid

delayed

Symptoms / effects, both acute and 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.

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

May cause long-term adverse effects in the environment. Do not allow material to **Ecotoxicity effects** 

contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Cobalt	LC50: > 100 mg/L, 96h static (Brachydanio rerio)		

12.2. Persistence and degradability Product contains heavy metals. Discharge into the environment must be avoided. Special

pre-treatment is necessary

Insoluble in water, May persist. **Persistence** 

Degradation in sewage

treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

May have some potential to bioaccumulate; Product has a high potential to bioconcentrate 12.3. Bioaccumulative potential

Component	log Pow	Bioconcentration factor (BCF)
Cobalt	5	No data available

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

solubility.

12.5. Results of PBT and vPvB

assessment

No data available for 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 **Ozone Depletion Potential** This product does not contain any known or suspected substance

## **SECTION 13: DISPOSAL CONSIDERATIONS**

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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. Empty containers

retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and

empty container away from heat and sources of ignition.

**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 flush to sewer. Can be landfilled or incinerated, when in compliance with

local regulations.

## **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

14.1. UN number UN3132

14.2. UN proper shipping name WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.

**Technical Shipping Name** (ALUMINIUM POWDER, Cobalt powder)

14.3. Transport hazard class(es) 4.3 **Subsidiary Hazard Class** 4.1 14.4. Packing group II

ADR

UN3132 14.1. UN number

14.2. UN proper shipping name Water-reactive solid, flammable, n.o.s. **Technical Shipping Name** (ALUMINIUM POWDER, Cobalt powder)

14.3. Transport hazard class(es) 4.3 **Subsidiary Hazard Class** 4.1 Π

14.4. Packing group

IATA

14.1. UN number UN3132

14.2. UN proper shipping name WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.\*

**Technical Shipping Name** (ALUMINIUM POWDER, Cobalt powder)

14.3. Transport hazard class(es) 4.3 **Subsidiary Hazard Class** 4.1 14.4. Packing group Π

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

## **Aluminum Cobalt powder**

**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
Aluminium	7429-90-5	231-072-3	-	-	Х	X	KE-00881	Х	-
Cobalt	7440-48-4	231-158-0	_	-	X	X	KF-06060	X	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Aluminium	7429-90-5	X	ACTIVE	X	-	X	Х	Х
Cobalt	7440-48-4	Х	ACTIVE	X	-	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

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)
Aluminium	7429-90-5	-	Use restricted. See item 75. (see link for restriction details)	-
Cobalt	7440-48-4	-	Use restricted. See item 30. (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)	-

## **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) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Aluminium	7429-90-5	Not applicable	Not applicable
Cobalt	7440-48-4	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

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

**National Regulations** 

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

**WGK Classification** 

Water endangering class = 3 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Aluminium	nwg	
Cobalt	WGK 3	Class II : 0.5 mg/m³ (Massenkonzentration) Krebserzeugende Stoffe - Class I : 0.05 mg/m³ (Massenkonzentration)

Component	France - INRS (Tables of occupational diseases)		
Aluminium	Tableaux des maladies professionnelles (TMP) - RG 32		
	Tableaux des maladies professionnelles (TMP) - RG 16,RG 16bis		
Cobalt	Tableaux des maladies professionnelles (TMP) - RG 65,RG 70,RG 70bis,RG 70ter		

#### 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

## **SECTION 16: OTHER INFORMATION**

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

H261 - In contact with water releases flammable gases

H250 - Catches fire spontaneously if exposed to air

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H360F - May damage fertility

H413 - May cause long lasting harmful effects to aquatic life

## Legend

**CAS** - Chemical Abstracts Service

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

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian 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

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of

Dangerous Goods by Road IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

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

MARPOL - International Convention for the Prevention of Pollution from Ships

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

## Key literature references and sources for data

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

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

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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards

Health Hazards

Environmental hazards

On basis of test data
Calculation method
Calculation method

**Training Advice** 

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

Prepared By Health, Safety and Environmental Department

**Creation Date** 25-Jul-2018 **Revision Date** 20-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**