

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

### 1.1. Product identifier

|                      |   |
|----------------------|---|
| Product Description: | <b><u>o-Phenylenediamine dihydrochloride</u></b>                          |
| Cat No. :            | <b>218480000; 218480250; 218481000</b>                                    |
| Synonyms             | 1,2-Benzenediamine dihydrochloride; 1,2-Phenylenediamine dihydrochloride. |
| Index No             | 612-146-00-8  |
| CAS No               | 615-28-1  |
| EC No                | 210-418-7   |
| Molecular Formula    | C6 H8 N2 . 2 H Cl   |

### 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

**UK entity/business name**  
Fisher Scientific UK  
Bishop Meadow Road,  
Loughborough, Leicestershire LE11 5RG, United Kingdom

**EU entity/business name**  
Thermo Fisher Scientific  
Janssen Pharmaceuticaaan 3a, 2440 Geel, Belgium

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**

Based on available data, the classification criteria are not met

#### **Health hazards**

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|   |                   |
|---|-------------------|
| Acute oral toxicity                         | Category 3 (H301) |
| Acute dermal toxicity                       | Category 4 (H312) |
| Acute Inhalation Toxicity - Dusts and Mists | Category 4 (H332) |
| Serious Eye Damage/Eye Irritation           | Category 2 (H319) |
| Skin Sensitization                          | Category 1 (H317) |
| Germ Cell Mutagenicity                      | Category 2 (H341) |
| Carcinogenicity                             | Category 2 (H351) |

## **Environmental hazards**

|                          |                   |
|--------------------------|-------------------|
| Acute aquatic toxicity   | Category 1 (H400) |
| Chronic aquatic toxicity | Category 1 (H410) |

Full text of Hazard Statements: see section 16

## **2.2. Label elements**



Signal Word

Danger

## **Hazard Statements**

- H301 - Toxic if swallowed
- H319 - Causes serious eye irritation
- H317 - May cause an allergic skin reaction
- H341 - Suspected of causing genetic defects
- H351 - Suspected of causing cancer
- H410 - Very toxic to aquatic life with long lasting effects
- H312 + H332 - Harmful in contact with skin or if inhaled

## **Precautionary Statements**

- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P337 + P313 - If eye irritation persists: Get medical advice/attention
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
- P280 - Wear protective gloves/protective clothing/eye protection/face protection

## **2.3. Other hazards**

- Toxic to terrestrial vertebrates
- This product does not contain any known or suspected endocrine disruptors

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

### **3.1. Substances**

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| Component                           | CAS No   | EC No             | Weight % | CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567   |
|-------------------------------------|----------|-------------------|----------|---|
| 1,2-Benzenediamine, dihydrochloride | 615-28-1 | EEC No. 210-418-7 | >95      | Acute Tox. 3 (H301)<br>Acute Tox. 4 (H312)<br>Acute Tox. 4 (H332)<br>Eye Irrit. 2 (H319)<br>Skin Sens. 1 (H317)<br>Muta. 2 (H341)<br>Carc. 2 (H351)<br>Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410) |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|   |  |
|---|--|
| <b>General Advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  |
| <b>Eye Contact</b>                        | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Call a physician or poison control center immediately.   |
| <b>Inhalation</b>                         | 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. |
| <b>Self-Protection of the First Aider</b> | 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 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

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

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

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No information available.

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

Do not allow run-off from fire-fighting to enter drains or water courses.

### **Hazardous Combustion Products**

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

## **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment as required. Ensure adequate ventilation. 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. Avoid dust formation. Do not get in eyes, on skin, or on clothing. 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**

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

**Technical Rules for Hazardous Substances (TRGS) 510**      Class 6.1C  
**Storage Class (LGK) (Germany)**

### **7.3. Specific end use(s)**

ACR21848

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Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

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

#### 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)

No information available

#### Predicted No Effect Concentration (PNEC)

No information available.

### 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        |
|----------------|-----------------------------------|-----------------|-------------|-----------------------|
| Nitrile rubber | See manufacturers recommendations | -               | EN 374      | (minimum requirement) |
| Neoprene       |                                   |                 |             |                       |
| Natural rubber |                                   |                 |             |                       |
| PVC            |                                   |                 |             |                       |

**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 compatibility, 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.

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|  |  |
|--|--|
|  | To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly  |
| <b>Large scale/emergency use</b>       | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced<br><b>Recommended Filter type:</b> Particulates filter conforming to EN 143  |
| <b>Small scale/Laboratory use</b>      | 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.<br><b>Recommended half mask:-</b> Particle filtering: EN149:2001<br>When RPE is used a face piece Fit Test should be conducted |
| <b>Environmental exposure controls</b> | Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.  |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

|  |                          |  |
|--|--------------------------|--|
| <b>Physical State</b>                          | Powder Solid             |  |
| <b>Appearance</b>                              | Light red                |  |
| <b>Odor</b>                                    | No information available |  |
| <b>Odor Threshold</b>                          | No data available        |  |
| <b>Melting Point/Range</b>                     | 258 °C / 496.4 °F        |  |
| <b>Softening Point</b>                         | No data available        |  |
| <b>Boiling Point/Range</b>                     | No information available |  |
| <b>Flammability (liquid)</b>                   | Not applicable           | Solid                                    |
| <b>Flammability (solid,gas)</b>                | No information available |  |
| <b>Explosion Limits</b>                        | No data available        |  |
| <b>Flash Point</b>                             | No information available | <b>Method -</b> No information available |
| <b>Autoignition Temperature</b>                | Not applicable           |  |
| <b>Decomposition Temperature</b>               | No data available        |  |
| <b>pH</b>                                      | No information available |  |
| <b>Viscosity</b>                               | Not applicable           | Solid                                    |
| <b>Water Solubility</b>                        | No information available |  |
| <b>Solubility in other solvents</b>            | No information available |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |  |
| <b>Component</b>                               | <b>log Pow</b>           |  |
| 1,2-Benzenediamine, dihydrochloride            | 0.15                     |  |
| <b>Vapor Pressure</b>                          | No data available        |  |
| <b>Density / Specific Gravity</b>              | No data available        |  |
| <b>Bulk Density</b>                            | No data available        |  |
| <b>Vapor Density</b>                           | Not applicable           | Solid                                    |
| <b>Particle characteristics</b>                | No data available        |  |

### 9.2. Other information

|                          |                        |
|--------------------------|------------------------|
| <b>Molecular Formula</b> | C6 H8 N2 . 2 H Cl      |
| <b>Molecular Weight</b>  | 181.07                 |
| <b>Evaporation Rate</b>  | Not applicable - Solid |

## SECTION 10: STABILITY AND REACTIVITY

|                         |  |
|-------------------------|--|
| <b>10.1. Reactivity</b> | None known, based on information available |
|-------------------------|--|

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## 10.2. Chemical stability

Sensitivity to light.

## 10.3. Possibility of hazardous reactions

**Hazardous Polymerization**  
**Hazardous Reactions**

No information available.  
None under normal processing.

## 10.4. Conditions to avoid

Incompatible products. Exposure to light.

## 10.5. Incompatible materials

Strong oxidizing agents. . Protect from light.

## 10.6. Hazardous decomposition products

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

## SECTION 11: TOXICOLOGICAL INFORMATION

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

#### Product Information

#### (a) acute toxicity;

|            |            |
|------------|------------|
| Oral       | Category 3 |
| Dermal     | Category 4 |
| Inhalation | Category 4 |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 2

#### (d) respiratory or skin sensitization;

|             |                   |
|-------------|-------------------|
| Respiratory | No data available |
| Skin        | Category 1        |

No information available

#### (e) germ cell mutagenicity;

Category 2  
Animal experiments showed mutagenic and teratogenic effects

#### (f) carcinogenicity;

Category 2  
Suspected human carcinogen

| Component                           | EU | UK | Germany | IARC     |
|-------------------------------------|----|----|---------|----------|
| 1,2-Benzenediamine, dihydrochloride |    |    |         | Group 2B |

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

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(i) STOT-repeated exposure; No data available  
Target Organs No information available.

(j) aspiration hazard; Not applicable  
Solid

**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

## 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

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

### 12.2. Persistence and degradability

#### Persistence

Persistence is unlikely.

#### Degradation in sewage treatment plant

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

### 12.3. Bioaccumulative potential

Bioaccumulation is unlikely

| Component                           | log Pow | Bioconcentration factor (BCF) |
|-------------------------------------|---------|-------------------------------|
| 1,2-Benzenediamine, dihydrochloride | 0.15    | No data available             |

### 12.4. Mobility in soil

No information available

### 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 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

Should not be released into the environment. Waste is classified as hazardous. Dispose of



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|                                       |  |
|---------------------------------------|--|
| <b>Products</b>                       | in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.  |
| <b>Contaminated Packaging</b>         | Dispose of this container to hazardous or special waste collection point.  |
| <b>European Waste Catalogue (EWC)</b> | According to the European Waste Catalog, Waste Codes are not product specific, but application specific.   |
| <b>Other Information</b>              | 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

|   |  |
|---|--|
| <b>14.1. UN number</b>  | UN2811   |
| <b>14.2. UN proper shipping name</b><br>Technical Shipping Name | Toxic solid, organic, n.o.s.<br>(1,2-PHENYLENEDIAMINE DIHYDRATE) |
| <b>14.3. Transport hazard class(es)</b>                         | 6.1  |
| <b>14.4. Packing group</b>                                      | III  |

### ADR

|   |  |
|---|--|
| <b>14.1. UN number</b>  | UN2811   |
| <b>14.2. UN proper shipping name</b><br>Technical Shipping Name | Toxic solid, organic, n.o.s.<br>(1,2-PHENYLENEDIAMINE DIHYDRATE) |
| <b>14.3. Transport hazard class(es)</b>                         | 6.1  |
| <b>14.4. Packing group</b>                                      | III  |

### IATA

|   |  |
|---|--|
| <b>14.1. UN number</b>  | UN2811   |
| <b>14.2. UN proper shipping name</b><br>Technical Shipping Name | Toxic solid, organic, n.o.s.<br>(1,2-PHENYLENEDIAMINE DIHYDRATE) |
| <b>14.3. Transport hazard class(es)</b>                         | 6.1  |
| <b>14.4. Packing group</b>                                      | III  |

**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

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)

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| Component                           | CAS No   | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|-------------------------------------|----------|-----------|--------|-----|-------|------|----------|------|------|
| 1,2-Benzenediamine, dihydrochloride | 615-28-1 | 210-418-7 | -      | -   | X     | X    | KE-02177 | X    | -    |

| Component                           | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|-------------------------------------|----------|------|---|-----|------|------|-------|-------|
| 1,2-Benzenediamine, dihydrochloride | 615-28-1 | X    | ACTIVE  | X   | -    | X    | 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) - 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) |
|-------------------------------------|----------|---|---|---|
| 1,2-Benzenediamine, dihydrochloride | 615-28-1 | -   | 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 |
|-------------------------------------|----------|---|--|
| 1,2-Benzenediamine, dihydrochloride | 615-28-1 | 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

Water endangering class = 3 (self classification)

| Component                           | France - INRS (Tables of occupational diseases)               |
|-------------------------------------|---|
| 1,2-Benzenediamine, dihydrochloride | Tableaux des maladies professionnelles (TMP) - RG 15,RG 15bis |

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## 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  
H312 - Harmful in contact with skin  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H317 - May cause an allergic skin reaction  
H341 - Suspected of causing genetic defects  
H351 - Suspected of causing cancer  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical 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

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

**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

### Key literature references and sources for data

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

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

**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)

### 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.

**Creation Date** 24-Nov-2010

**Revision Date** 27-Sep-2023

**Revision Summary** Not applicable.

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

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## 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**