

# Safety Data Sheet

fluorochem.

## 1. Identification of the substance/mixture

### 1.1 Product identification

|                           |                          |
|---------------------------|--------------------------|
| Product name              | 3-Chloropropane-1,2-diol |
| Other names               |                          |
| Product code              | F242924                  |
| CAS                       | 96-24-2                  |
| MDL                       | MFCD00004712             |
| EINECS                    | 202-492-4                |
| REACH Registration number |                          |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

|                      |  |
|----------------------|--|
| Relevant uses        | For research and development purposes. |
| Uses advised against | No uses advised.                       |

### 1.3 Safety Data Sheet supplier details

|           |   |
|-----------|---|
| Company   | Fluorochem Ltd  |
| Address   | Unit 14, Graphite Way<br>Hadfield<br>Glossop Derbys. SK13 1QH<br>United Kingdom |
| Telephone | +44 1457 860111   |
| Email     | sds@fluorochem.co.uk  |

### 1.4 Emergency Telephone

|                     |                                       |
|---------------------|---------------------------------------|
| Emergency Telephone | +44 20 3807 3798 (Poison Information) |
|---------------------|---------------------------------------|

## 2. Hazard Identification

## 2.1 Classification of the substance or mixture

|                |                    |
|----------------|--------------------|
| Classification | H370 STOT SE 1     |
|                | H372 STOT RE 1     |
|                | H315 Skin Irrit. 2 |
|                | H301 Acute Tox. 3  |
|                | H330 Acute Tox. 2  |
|                | H290 Met. Corr. 1  |
|                | H318 Eye Dam. 1    |
|                | H351 Carc. 2       |
|                | H360 Repr. 1B      |

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## 2.2 Label Elements

Signal Word

**Danger**

Pictograms



**GHS05**



**GHS06**



**GHS07**



**GHS08**

Hazards

**H370** Causes damage to organs.  
**H372** Causes damage to organs through prolonged or repeated exposure.  
**H315** Causes skin irritation.  
**H301** Toxic if swallowed.  
**H330** Fatal if inhaled.  
**H290** Maybe corrosive to metals.  
**H318** Causes serious eye damage.  
**H351** Suspected of causing cancer.  
**H360** May damage fertility or the unborn child.

Precautions

**P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
**P320** Specific treatment is urgent (see Section 4 on this SDS).  
**P390** Absorb spillage to prevent material damage.  
**P403+P233** Store in a well-ventilated place. Keep container tightly closed.  
**P405** Store locked up.  
**P501** Dispose of contents/container to hazardous waste disposal.  
**P201** Obtain special instructions before use.  
**P361+P364** Take off immediately all contaminated clothing and wash it before reuse.  
**P264** Wash hands thoroughly after handling.  
**P284** Wear respiratory protection.  
**P271** Use only outdoors or in a well-ventilated area.  
**P234** Keep only in original packaging.  
**P260** Do not breathe dust/fume/gas/mist/vapours/spray.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P308+P311** IF exposed or concerned: Call a POISON CENTER/doctor.  
**P310** Immediately call a POISON CENTER/doctor.  
**P406** Store in a corrosion resistant container with a resistant inner

liner.

**P263** Avoid contact during pregnancy and while nursing.

**P301+P310** IF SWALLOWED: Immediately call a POISON CENTER/doctor.

**P301+P330+P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**P102** Keep out of reach of children.

**P270** Do not eat, drink or smoke when using this product.

**P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

**P337+P313** If eye irritation persists: Get medical advice/attention.

**P101** If medical advice is needed, have product container or label at hand.

**P272** Contaminated work clothing should not be allowed out of the workplace.

**P202** Do not handle until all safety precautions have been read and understood.

**P280** Wear protective gloves/protective clothing and eye/face protection.

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

**P342+P311** If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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## 2.3 Other Hazards

Other Classification Hazards

## 3. Composition

### 3.1 SUBSTANCE

| Name                     | CAS     | Einecs    | Composition | Hazards |
|--------------------------|---------|-----------|-------------|---------|
| 3-Chloropropane-1,2-diol | 96-24-2 | 202-492-4 |             |         |

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### 3.2 MIXTURE

Not applicable. Product is a substance.

## 4. First Aid Measures

### 4.1 Description of First Aid Measures

#### Eye Contact

Where Diphoterine is not available, rinse eyes with copious amounts of water for at least 20 minutes. Protect uninjured eye. Remove contact lenses if present and easy to do. Continue rinsing and seek immediate medical attention.

#### Ingestion

Where Diphoterine is not available, rinse mouth with copious amounts of water. Seek urgent medical advice.

#### Inhalation

Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory problems seek imm-

mediate medical attention.

#### **Skin Contact**

Where Diphoterine is not available, wash immediately with plenty of water and soap. Remove contaminated clothing immediately. Immediately seek medical attention.

#### **General Advice**

No additional advice.

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### **4.2 Most Important Symptoms and Effects**

#### **Most Important Symptoms and Effects**

No known symptoms or effects.

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### **4.3 Indication of any urgent medical attention and special treatments needed**

#### **Immediate First Aid Measures**

No additional first aid measures required.

## **5. Fire Fighting Measures**

### **5.1 Extinguishing Media**

#### **Suitable Fire Extinguishing Media**

Carbon dioxide, alcohol resistant foam or dry chemical powder.

#### **Unsuitable Fire Extinguishing Media**

No known unsuitable media.

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

#### **Special Hazards**

In combustion toxic fumes may form.

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### **5.3 Recommendations for firefighting personnel**

#### **Advice for Fire Fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

## **6. Accidental Release Measures**

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

#### **Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Keep personnel away from spill/leak.

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### **6.2 Environmental Precautions**

#### **Environmental Precautions**

Prevent further leakage if safe to do so. Prevent product from entering drains. Do not let product enter waterways or sewer systems. Discharge into the environment must be avoided.

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### **6.3 Containment and cleaning methods and materials**

#### **Containment - Methods and Materials**

Absorb the spilled material with an inert absorbent (e.g. sand, silica gel, rag, vermiculite) before transferring into an airtight container. Remove all sources of ignition. Dispose of appropriately according to local regulations.

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### **6.4 References to other sections**

## Referenced SDS Sections

For personal protection see section 8. For disposal see section 13.

## 7. Handling and Storage

### 7.1 Precautions for safe handling

#### Safe Handling

Wear appropriate personal protective equipment. Use only under a chemical fume hood. Keep away from heat/sparks/open flame/hot surfaces. Take measures to prevent the build-up of electrostatic charge. Ensure adequate exhaust ventilation, especially if dust, aerosol or fumes will be generated. Avoid contact with skin, eyes and clothing. For precautions see section 2.2.

#### Protection Against Explosion and Fire

Where possible, use anti static and spark proof equipment when handling.

#### General Occupational Hygiene

Handle in accordance with good industrial hygiene and safety practice. Wash hands before and after use. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

### 7.2 Conditions for Safe Storage and Incompatibilities

#### Managing Storage Risks

Do not pack in metal. Air sensitive.

#### Storage Controls

Store under inert gas. , May be corrosive to metals.

#### Maintaining Integrity

Always store and handle under inert gas.

#### Other Advice

No other specific advice available.

### 7.3 Specific End Use(s)

#### Specific End Use(s)

## 8. Exposure Controls / Personal Protection

### 8.1 Control Parameters

#### Control Parameters

No data available.

### 8.2 Exposure Controls

#### Engineering Measures

Use only under a chemical fume hood ensuring adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Face Protection

Wear tightly fitting safety goggles which adhere to European standard EN 166. Ensure eye bath is to hand.

#### Hand Protection

Handle with impermeable gloves. Inspect gloves before use. Gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance

with applicable laws and good laboratory practices. Wash and dry hands.

#### **Skin Protection**

Wear appropriate protective clothing ensuring all skin is covered. Wear safety shoes that meet at least S1 standards. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory Protection**

Product should be handled in a fume cupboard with adequate extraction. No respiratory equipment is needed under normal use conditions.

#### **Hygiene Measures**

Ensure hair or skin particles cannot enter the chemical container.

#### **Environment Exposure Controls**

No data available.

## **9. Physical and Chemical Properties**

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

|   |                                |
|---|--------------------------------|
| a) State  | Viscous Liquid                 |
| b) Colour   | No data available.             |
| c) Odour  | No data available.             |
| d) Melting Point / Freezing Point                 | -40.3 - -52.2°C                |
| e) Initial Boiling point or Boiling range         | 213.0°C                        |
| f) Flammability                                   | No data available.             |
| g) Upper / Lower Flammability or Explosion Limits | No data available.             |
| h) Flash Point                                    | 142°C                          |
| i) Auto Ignition Temperature                      | 365°C                          |
| j) Decomposition Temperature                      | 150                            |
| k) pH   | No data available.             |
| l) Viscosity                                      | No data available.             |
| m) Solubility                                     | No data available.             |
| n) Partition Coefficient                          | 0.5 at 25°C                    |
| o) Vapour Pressure                                | 71 Pa at 20°C                  |
| p) Relative Density                               | 1.324g/cm <sup>3</sup> at 20°C |
| q) Vapour Density                                 | No data available.             |
| r) Appearance                                     | No data available.             |

### **9.2 Other Safety Information**

|                   |                    |
|-------------------|--------------------|
| Other Information | No data available. |
|-------------------|--------------------|

## **10. Stability and Reactivity**

### **10.1 Reactivity**

|            |             |
|------------|-------------|
| Reactivity | Hygroscopic |
|------------|-------------|

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## 10.2 Stability

|           |  |
|-----------|--|
| Stability | Stable under recommended storage conditions. |
|-----------|--|

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## 10.3 Possibility of Hazardous Reactions

|                                    |                                       |
|------------------------------------|---------------------------------------|
| Possibility of Hazardous Reactions | None under normal storage conditions. |
|------------------------------------|---------------------------------------|

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## 10.4 Conditions to Avoid

|                     |   |
|---------------------|---|
| Conditions to Avoid | Heat, sparks, open flames, sources of ignition. Exposure to moisture. |
|---------------------|---|

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## 10.5 Incompatible Materials

|                        |                       |
|------------------------|-----------------------|
| Incompatible Materials | Do not pack in metal. |
|------------------------|-----------------------|

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## 10.6 Hazardous Decomposition Products

|                                  |                    |
|----------------------------------|--------------------|
| Hazardous Decomposition Products | No data available. |
|----------------------------------|--------------------|

# 11. Toxicology Information

## 11.1 Information on Hazard Classes, as defined in Regulation (EC) No. 1271/2008

|                                   |  |
|-----------------------------------|--|
| Acute Toxicity                    | Oral LD50, Rat, 55mg/kg Inhalation LC50, Rat, 0.28 - 1.13mg/l/14 d                       |
| Skin Corrosion / Irritation       | No Toxicology data available for this product.   |
| Serious Eye Damage / Irritation   | Causes serious eye damage.   |
| Respiratory or Skin Sensitisation | Fatal if inhaled., Toxic if swallowed.   |
| Germ Cell Mutagenicity            | Causes damage to organs through prolonged or repeated exposure, Causes damage to organs. |
| Carcinogenicity                   | Suspected of causing cancer.   |
| Reproductive Toxicity             | May damage fertility or the unborn child.  |
| STOT-single Exposure              | Causes damage to organs through prolonged or repeated exposure, Fatal if inhaled.        |
| STOT-repeated Exposure            | Causes damage to organs through prolonged or repeated exposure                           |
| Aspiration Hazard                 | No Toxicology data available for this product.   |

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## 11.2 Information about Other Hazards

|                                 |  |
|---------------------------------|--|
| Endocrine Disrupting Properties | Avoid release to the environment.              |
| Addition Toxicology Information | No Toxicology data available for this product. |

# 12. Ecological Information

## 12.1 Toxicity

aquatic invertebrates: Daphnia magna EC50 -  
>100mg/l/48 h Toxicity to aquatic algae and cyanobacteria: Raphidocelis subcapitata EC50 - >100mg/l/72 h

## 12.2 Persistence and Degradability

**Persistence and Degradability** No Ecological data available for this product.

## 12.3 Bio-Accumulative Potential

**Bio-Accumulative Potential** No Ecological data available for this product.

## 12.4 Mobility in Soil

**Mobility in Soil** Log Pow: 0.5 at 25°C

## 12.5 Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** No Ecological data available for this product.

## 12.6 Endocrine Disrupting Properties

**Endocrine Disrupting Properties** Avoid release to the environment.

## 12.7 Other Adverse Effects

**Other Adverse Effects** Avoid release to the environment.

# 13. Disposal Considerations

## 13.1 Waste Treatment Methods

**Disposal Operations** Ensure product is disposed of by licensed waste carriers.  
**Disposal of Packaging** Ensure INNER PACKAGING is disposed of by licensed waste carriers. Some OUTER PACKAGING MAY be recyclable if not contaminated.

# 14. Transport Information

## 14.1 UN Number

|                       |      |                      |      |                       |      |
|-----------------------|------|----------------------|------|-----------------------|------|
| <b>IATA UN Number</b> | 2689 | <b>ADR UN Number</b> | 2689 | <b>IMDG UN Number</b> | 2689 |
|-----------------------|------|----------------------|------|-----------------------|------|

## 14.2 Official UN Shipping Name

|                                  |  |                                 |  |                                  |  |
|----------------------------------|--|---------------------------------|--|----------------------------------|--|
| <b>IATA Proper Shipping Name</b> | Glycerol alpha-monochlorohydrin (3-Chloropropane-1,2-diol) | <b>ADR Proper Shipping Name</b> | Glycerol alpha-monochlorohydrin (3-Chloropropane-1,2-diol) | <b>IMDG Proper Shipping Name</b> | Glycerol alpha-monochlorohydrin (3-Chloropropane-1,2-diol) |
|----------------------------------|--|---------------------------------|--|----------------------------------|--|

## 14.3 Hazard classes for transport purposes



|                          |     |                         |     |                          |                    |
|--------------------------|-----|-------------------------|-----|--------------------------|--------------------|
| <b>IATA Hazard Class</b> | 6.1 | <b>ADR Hazard Class</b> | 6.1 | <b>IMDG Hazard Class</b> | No data available. |
|--------------------------|-----|-------------------------|-----|--------------------------|--------------------|

#### 14.4 Packing Group

|                           |     |                          |     |                           |     |
|---------------------------|-----|--------------------------|-----|---------------------------|-----|
| <b>IATA Packing Group</b> | III | <b>ADR Packing Group</b> | III | <b>IMDG Packing Group</b> | III |
|---------------------------|-----|--------------------------|-----|---------------------------|-----|

#### 14.5 Enviromental Hazards

|                                   |                    |                                  |                    |                                   |                    |
|-----------------------------------|--------------------|----------------------------------|--------------------|-----------------------------------|--------------------|
| <b>IATA Environmental Hazards</b> | No data available. | <b>ADR Environmental Hazards</b> | No data available. | <b>IMDG Environmental Hazards</b> | No data available. |
|-----------------------------------|--------------------|----------------------------------|--------------------|-----------------------------------|--------------------|

#### 14.6 Special Precautions

No Information Available

#### 14.7 Bulk Maritime Transport in accordance with IMO Instructions

|                       |          |                      |          |                       |          |
|-----------------------|----------|----------------------|----------|-----------------------|----------|
| <b>IATA Sub Class</b> | - None - | <b>ADR Sub Class</b> | - None - | <b>IMDG Sub Class</b> | - None - |
|-----------------------|----------|----------------------|----------|-----------------------|----------|

## 15. Regulatory Information

#### 15.1 Health, safety and environmental regulations/legislation specific to the substance or mixture

|                               |   |
|-------------------------------|---|
| <b>Regulatory Information</b> | As far as Fluorochem is aware, there are no further regulations controlling this product. |
|-------------------------------|---|

#### 15.2 Chemical Safety Assessment

|                                   |  |
|-----------------------------------|--|
| <b>Chemical Safety Assessment</b> | There is no chemical safety assessment available for this product. |
|-----------------------------------|--|

## 16. Other Information

#### Information Not Covered in Other Sections

|  |   |
|--|---|
| <b>Information Not Covered in Other Sections</b> | ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road (European agreement on the international transport of dangerous goods by road). RID: International Regulations concerning the Transport of Dangerous Goods by Rail (Regulations regarding the international transport of dangerous goods by rail). IMDG: International Maritime Code for Dangerous Goods. IATA: International Air Transport Association. IATA-DGR: Dangerous Goods Regulations fra International Air Transport Association. ICAO: International Civil Aviation Organisation. ICAO-TI: Technical instructions from ICAO. GHS: Globally Harmonized System for Classification and Labelling of Chemicals. CAS: Chemical Abstracts Service |
|--|---|

#### Other Information

|                      |  |
|----------------------|--|
| <b>Revision</b>      | 1  |
| <b>Date Modified</b> | 19/12/2024 18:46:00  |
| <b>Disclaimer</b>    | The product listed is for research and development purposes only and |

not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user. This SDS adheres to Regulation (EC) No 1907/2006, and as of 13th April 2023, also conforms to EU Regulation 2020/878.