SAFETY DATA SHEET

fluorochem.

1. Identification of Substance / Mixture

Product Identifier

1.1.2 Product Name 3-Bromo-4,5-dihydroxybenzonitrile

1.1.2 Other Names

1.1.1 Product CodeF9828321.1.3 CAS38897-25-5

1.1.4 MDL

1.1.5 EINECS N/A

1.1.6 REACH Registration Number

1.2.1 Relevant Uses For research and development purposes only.

1.2.2 Uses Advised Against No uses advised against.

1.3 Supplier Details

1.3.1 Company Fluorochem Ltd

1.3.2 Address Unit 14, Graphite Way

Hadfield

Glossop Derbys. SK13 1QH

United Kingdom

1.3.3 Telephone 01457 860111

1.3.4 Emailsds@fluorochem.co.uk1.4.1 Emergency Telephone+44 20 3807 3798

2. Hazards Identification

2.1.1 Classification

Acute Tox. 4 Eye Irrit. 2A Skin Irrit. 2 STOT SE 3

2.2.1 Signal Word

Warning

2.2.2 Pictograms



GHS07

2.2.3 Hazards

H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled.

H335 May cause respiratory irritation.

2.2.4 Precautions

P260.1 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area.

P280.4 Wear protective gloves/protective clothing and eye/face protection.

P301+P310.1 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352.2 IF ON SKIN: Wash with plenty of water and soap.

P303+P361+P353.1 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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

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

P310.1 Immediately call a POISON CENTER/doctor.

P321 Specific treatment.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P342+P311.1 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P362+P364 Take off contaminated clothing and wash it before reuse. P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501.3 Dispose of contents/container to hazardous waste disposal.

2.2.5 Other Classification Hazards

3. Composition of Ingredients

SUBSTANCE

3.1.1 Name 3.1.2 CAS Hazards 3.1.3 Composition Einecs

3-Bromo-4,5dihydroxybenzonitrile

38897-25-5

N/A

H302 Acute Tox. 4 H312 Acute Tox. 4 H315 Skin Irrit. 2 H319 Eye Irrit. 2A H332 Acute Tox. 4

H335 STOT SE 3

4. First Aid Measures

4.1.1 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

4.1.2 Ingestion If swallowed rinse the mouth with plenty of water (only if the person is conscious) and contact a poison centre or

4.1.3 Inhalation Remove person to fresh air and keep comfortable for breathing. Call a poison centre or physician if you feel unwell. If

breathing is irregular or stopped, administer artificial respiration.

4.1.4 Skin Contact Where Diphoterine is not available, wash immediately with plenty of water and soap. Remove contaminated clothing

immediately. Immediately seek medical attention.

4.1.5 General Advice No additional advice.

4.2.1 Most Important Symptoms and Effects No known symptoms or effects.

4.3.1 Immediate First Aid Measures No special immediate treatment required

5. Fire Fighting Measures

5.1.1 Suitable Fire Extinguishing Media Carbon dioxide, alcohol resistant foam or dry chemical powder. Use water to extinguish fire

5.1.2 Unsuitable Fire Extinguishing Media No known unsuitable media.

5.2.1 Special Hazards Thermal decomposition can lead to release of irritating gases and vapours. 5.3.1 Advice for Fire Fighters As in any fire, wear self-contained breathing apparatus and full protective gear.

6. Accidental Release Measures

6.1.1 Personal Precautions Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate

ventilation. Keep personnel away from spill/leak.

6.2.1 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.

6.3.1 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.

6.4.1 Referenced SDS Sections For personal protection see section 8. For disposal see section 13.

Handling and Storage

Personal Precautions

7.1.1 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.

7.1.2 Protection Against Explosion and Fire

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

7.1.3 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.

Conditions for Safe Storage and Incompatabilities

7.2.1 Managing Storage Risks Keep container tightly closed and upright. Store in a cool, dry and well-ventilated place.

7.2.2 Storage Controls Keep container tightly closed in a cool area away from sunlight or heat sources. 7.2.3 Maintaining Integrity Keep container tightly closed in a cool area away from sunlight or heat sources.

7.2.4 Other Advice No other specific advice available.

No specific end uses are advised. The products supplied are for research purposes only. 7.3.1 Specific End Use(s)

8. Exposure Controls / Personal Protection

8.1.1 Control Parameters

8.2.1 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

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

8 2 3 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

8.2.4 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

8.2.5 Respiratory Protection Product should be handled in a fume cupboard with adequate extraction. No respiratory equipment is needed under

normal use conditions

8.2.6 Hygiene Protection Ensure hair or skin particles cannot enter the chemical container.

8.2.7 Environment Exposure Controls Avoid discharge into the environment, see section 6.2.

9. Physical and Chemical Properties

9.1.1 State No data available 9.1.2 Appearance No data available. 9.1.3 Odour No data available. 9.1.4 Odour Threshold No data available. 9.1.5 pH No data available. 9.1.6 Melting Point / Freezing Point No data available. 9.1.7 Initial Boiling Point No data available. 9.1.8 Boiling Range No data available. No data available. 9.1.9 Flash Point 9.1.10 Evaporation Rate No data available 9.1.11 Flammability No data available 9.1.12 Upper / Lower Flammability or No data available.

Explosion Limits

No data available.

9.1.13 Vapour Pressure 9.1.14 Vapour Density No data available. 9.1.15 Relative Density No data available.

9.1.16 Solubility

9.1.17 Partition Coefficient No data available 9.1.18 Auto Ignition Temperature No data available. 9.1.19 Decomposition Temperature No data available. 9.1.20 Viscosity No data available. 9.1.21 Explosive Properties No data available.

9.1.22 Oxidising Properties No data available

9.2.1 Other informationNo additional information available.

10. Stability and Reactivity

10.1.1 Reactivity10.2.1 StabilityNo known Reactivity, based on information available.Stable under recommended storage conditions.

10.3.1 Possibility of Hazardous ReactionsNone under normal storage conditions.

10.4.1 Conditions To Avoid Heat, sparks, open flames, sources of ignition. Exposure to moisture.

10.5.1 Incompatible Materials Strong oxidising agents.

10.6.1 Hazardous Decomposition Products No Data Available.

11. Toxicology Information

11.1.1 Acute Toxicity No Toxicology data available for this product. No Toxicology data available for this product. 11.1.2 Skin Corrosion / Irritation 11.1.3 Serious Eye Damage / Irritation No Toxicology data available for this product. 11.1.4 Respiratory or Skin Sensitisation No Toxicology data available for this product. 11.1.5 Germ Cell Mutagenicity No Toxicology data available for this product. 11.1.6 Carcinogenicity No Toxicology data available for this product. 11.1.7 Reproductive Toxicity No Toxicology data available for this product. 11.1.8 STOT-single Exposure No Toxicology data available for this product. 11.1.9 STOT-repeated Exposure No Toxicology data available for this product. 11.1.10 Aspiration Hazard No Toxicology data available for this product. 11.2.1 Additional Toxicology Information No Toxicology data available for this product.

12. Ecological Information

12.1.1 Toxicity

No Ecological data available for this product.

12.2.1 Persistence and Degradability

No Ecological data available for this product.

12.3.1 Bio-Accumulative Potential

No Ecological data available for this product.

12.4.1 Mobility in Soil

No Ecological data available for this product.

No Ecological data available for this product.

No Ecological data available for this product.

12.7.1 Endocrine Disrupting Properties

Avoid release to the environment.

12.6.1 Other Adverse Effects

No Ecological data available for this product.

13. Disposal Considerations

13.1.1 Disposal Operations Ensure product is disposed of by licensed waste carriers.

13.1.2 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

IATA UN Number ADR UN Number IMDG UN Number

14.1.2 IATA ProperNon Hazardous For Shipping NameADR Proper Shipping Non Hazardous For Transport (3-Bromo-4,5-Non Hazardous For Transport (3-Bromo-4,5-IMDG Proper Shipping Non Hazardous For NameNon Hazardous For Transport (3-Bromo-4,5-

dihydroxybenzonitrile) dihydroxybenzonitrile) dihydroxybenzonitrile)

IATA Packing Group IMDG Packing Group

14.1.4 IATA Hazard Class ADR Hazard Class IMDG Hazard Class
14.1.5 IATA Sub Class ADR Sub Class IMDG Sub Class

15. Regulatory Information

15.1.1 Regulatory Information As far as Fluorochem is aware, there are no further regulations controlling this product.

15.2.1 Chemical SafetyNo Chemical Safety Assessment is available for this product.

Assessment

16. Other Information

16.1.2 Information Not Covered in Other Sections

ADR: Accord Europeen sur le transport des merchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)

RID:Reglement International concernant le transport des merchandises dangereuses par chemin de fer (Regulations

concerning 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 by the International Air Transport Association ICAO:International Civil

Aviation Organization

ICAO-TI: Technical Instructions by the ICAO

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS:Chemical Abstracts Service

Revision

Date Modified

16.1.1 Disclaimer

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Oct 16, 2023 3:17:00 PM

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.