SAFETY DATA SHEET

fluorochem.

1. Identification of Substance / Mixture

Product Identifier

1.1.2 Product Name 4-Formylphenylboronic acid

1.1.2 Other Names

 1.1.1 Product Code
 F010799

 1.1.3 CAS
 87199-17-5

 1.1.4 MDL
 MFCD00151823

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

1.3.3 Telephone

1.3.1 Company Fluorochem Ltd

1.3.2 Address Unit 14, Graphite Way

Hadfield

Glossop Derbys. SK13 1QH

United Kingdom 01457 860111

1.3.4 Email sds@fluorochem.co.uk

1.4.1 Emergency Telephone +44 20 3807 3798

2. Hazards Identification

2.1.1 Classification
Skin Sens. 1

2.2.1 Signal Word Warning



GHS07

2.2.3 Hazards

2.2.2 Pictograms

H317 May cause an allergic skin reaction.

2.2.4 Precautions

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product. **P280.4** Wear protective gloves/protective clothing and eye/face protection.

P301+P312.2 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. 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.

P321 Specific treatment.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
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

Composition of Ingredients

SUBSTANCE

3.1.1 Name 3.1.2 CAS Einecs 3.1.3 Composition Hazards

4-Formylphenylboronic acid 87199-17-5 N/A H317 Skin Sens. 1

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

attention

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

physician if you feel unwell.

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 ContactWhere Diphoterine is not available, wash immediately with plenty of water and soap. Remove contaminated clothing

immediately. Immediately seek medical attention.

4.1.5 General AdviceNo 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.

Accidental Release Measures

6.1.1 Personal PrecautionsUse 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 PrecautionsPrevent further leakage if safe to do so. Prevent product from entering drains. Do not let product enter waterways or

ewer 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

7. Handling and Storage

Personal Precautions

7.1.1 Safe HandlingWear 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 AdviceNo other specific advice available.

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

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.

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

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 Solid

9.1.2 Appearance Chunks Crystalline Powder

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 260 to 266°C 9.1.7 Initial Boiling Point No data available. 9.1.8 Boiling Range No data available. 9.1.9 Flash Point No data available 9.1.10 Evaporation Rate No data available 9.1.11 Flammability No data available.

9.1.12 Upper / Lower Flammability or

Explosion Limits

No data available

9.1.13 Vapour Pressure No data available. 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 information No additional information available

10. Stability and Reactivity

10.1.1 Reactivity No known reactivity, based on information available.

10.2.1 Stability Stable under recommended storage conditions.

10.3.1 Possibility of Hazardous Reactions None under normal storage conditions.

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

No Toxicology data available for this product.

10.5.1 Incompatible Materials Strong oxidising agents. 10.6.1 Hazardous Decomposition Products No Data Available.

11. Toxicology Information

11.1.5 Germ Cell Mutagenicity

11.1.1 Acute Toxicity No Toxicology data available for this product. 11.1.2 Skin Corrosion / Irritation No Toxicology data available for this product.

11.1.3 Serious Eye Damage / Irritation No Toxicology data available for this product.

11.1.4 Respiratory or Skin Sensitisation May cause an allergic skin reaction

Page 3 of 4

 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 ToxicityNo Ecological data available for this product.12.2.1 Persistence and DegradabilityNo Ecological data available for this product.12.3.1 Bio-Accumulative PotentialNo Ecological data available for this product.12.4.1 Mobility in SoilNo Ecological data available for this product.12.5.1 Results of PBT and vPvB assessmentNo Ecological data available for this product.12.7.1 Endocrine Disrupting PropertiesAvoid release to the environment.

12.6.1 Other Adverse EffectsNo 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 Proper(4-Formylphenylboronic
Shipping NameADR Proper Shipping
NameNon Hazardous For
Transport (4-IMDG Proper Shipping
Name(4-Formylphenylboronic
Name

Formylphenylboronic acid)

IATA Packing GroupADR Packing GroupIMDG Packing Group14.1.4 IATA Hazard ClassADR Hazard ClassIMDG Hazard Class14.1.5 IATA Sub ClassADR Sub ClassIMDG 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 Safety No Chemical Safety Assessment is available for this product.

Assessment

16. Other Information

16.1.2 Information Not Covered in OtherADR: 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 Oct 12, 2023 11:37:00 AM

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.