

## 1: Identification of substance / mixture

### 1. Product Identifier

Substance

Product Name **5-Bromovaleronitrile**  
Product Code 001007  
CAS Number 5414-21-1  
Other Names 4-Bromobutyl Cyanide

IUPAC

MFCD Number MFCD00001976

EC/EINECS 226-505-8

REACH Number

Index-No

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

Research and Development

### 3. Details of the supplier of the safety data sheet

Fluorochem Ltd  
Unit 14, Graphite Way  
Hadfield  
Derbyshire  
SK13 1QH  
UK

Telephone: +44(0)1457 860111  
Fax: +44(0)1457 892799  
Email: sds@fluorochem.co.uk



### 4. Emergency telephone number

+44(0)7855 268577 -

## 2. Hazards Identification

### 1. Classification of the substance or mixture

H301	Acute Tox. 3	
H311	Acute Tox. 3	
H331	Acute Tox. 3	

### 2. Label elements

Signal Word **Danger**



### Hazard Statements

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.

### Precautionary Phrases

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P311	Call a POISON CENTER or doctor/physician.
P361	Remove/Take off immediately all contaminated clothing.

### 3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

## 3. Composition / Information on Ingredients

## 1. Substances

Product Name	Hazards	Concentration
5-Bromovaleronitrile		
CAS Number: 5414-21-1 EC/EINECS: 226-505-8	H301, H311, H331 Acute Tox. 3	<=100%

## 4. First Aid Measures

### 1. Description of first aid measures

- Skin Contact* P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
- Eye Contact* Rinse opened eye for several minutes under running water.
- Ingestion* P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
Wash out mouth with water.
- Inhalation* P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

### 2. Most important symptoms and effects

There may be pain and redness.

### 3. Indication of any immediate medical attention

P311: Call a POISON CENTER or doctor/physician.  
No additional measures required

## 5. Firefighting measures

### 1. Extinguishing Media

*Suitable* Carbon dioxide.  
Alcohol resistant foam.  
Dry chemical powder.

*Unsuitable* no data

### 2. Special Hazards arising from the substance or mixture

In combustion toxic fumes may form.

### 3. Advice for Fire Fighters

Wear self-contained breathing apparatus.  
Wear protective clothing to prevent contact with skin and eyes.

## 6. Accidental Release Measures

### 1. Personal Precautions

Do not attempt to take action without suitable protective clothing – see section 8 of SDS.  
Evacuate the area immediately.

### 2. Environmental Precautions

Do not discharge into drains or rivers.  
Contain the spillage using bunding.

### 3. Methods & Materials

Mix with sand or vermiculite.  
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

### 4. Preventing the occurrence of secondary hazards.

No Special Measures Required

## 7. Handling and Storage

### 1. Personal Precautions

*Safe Handling* Ensure there is sufficient ventilation of the area.  
P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.

*Protection against explosions and fires* P361: Remove/Take off immediately all contaminated clothing.  
P363: Wash contaminated clothing before reuse.

### 2. Conditions for safe storage, including any incompatibilities

*Managing Storage Risks* Store in cool, well ventilated area.  
Keep container tightly closed.

*Storage Controls* No special requirements

*Maintaining Integrity* Store away from oxidising agents  
Keep in tightly closed container in cool area away from direct sunlight or heat sources.

*Other advice* P403 + P233: Store in a well-ventilated place. Keep container tightly closed.  
P405: Store locked up.

### 3. Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

## 8. Exposure Controls/Personal Protection

### 1. Control Parameters

No Data Available

### 2. Exposure Controls

*General protective and hygiene measures* P280: Wear protective gloves/protective clothing/eye protection/face protection.  
Wash hands during breaks and at the end of handling the material  
Immediately remove any contaminated clothing

*Engineering measures* P271: Use only outdoors or in a well-ventilated area.

*Eye / Face Protection* Safety Glasses with side-shields.

*Hand protection* Protective gloves.

*Respiratory protection* P260: Do not breathe dust/fume/gas/mist/vapours/spray.  
Use breathing protection with high concentrations

*Skin protection* Handle with gloves.  
Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice.  
Wash and dry hands.  
Protective clothing.

*Other personal protection advice* no data

## 9. Physical and Chemical Properties

### 1. Physical and Chemical Properties

Appearance	Liquid
Odour	Aromatic
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	No Data Available
Initial boiling point and boiling range	111°C /1.6kPa
Flash point	No Data Available
Evaporation rate	No Data Available

Flammability(solid, gas)	No Data Available
Upper/lower flammability or explosive limits	No Data Available
Vapour pressure	No Data Available
Vapour density	No Data Available
Relative density	1.40
Solubility(ies):	No Data Available
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive properties	No Data Available
Oxidising properties	No Data Available

## 2. Other Information

No additional information available

## 10. Stability and Reactivity

### 1. Reactivity

Hygroscopic

### 2. Stability

Stable under normal conditions.

### 3. Possibility of Hazardous Reactions

no hazardous reactions known

### 4. Conditions to Avoid

no specific conditions to avoid

### 5. Incompatible Materials

Oxidising agents.  
Reducing agents.  
Strong acids.  
Strong bases.

### 6. Hazardous Decomposition Products

In combustion emits toxic fumes.  
In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

## 11. Toxicology information

### 1. Information

<i>Acute Toxicity</i>	no data
<i>Skin corrosion/irritation</i>	irritant for skin and mucous membranes
<i>Serious eye Damage/irritation</i>	irritant effect
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	not known
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known

*Aspiration hazard* not known

## 2. Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

## 12. Ecological Information

### 1. Toxicity

not known

### 2. Persistence and degradability

not known

### 3. Bio-Accumulative Potential

not known

### 4. Mobility and Soil

not known

### 5. Results of PBT & vPvB assessment

not known

### 6. Other adverse effects

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

## 13. Disposal Considerations

### 1. Waste Treatment Methods

*Disposal Operations*

*Disposal of Packaging* Disposal must be made according to official regulations.

## 14. Transport Information

### Air (ICAO)

1. **UN Number:** 3276
2. **Shipping Name:** Nitriles, liquid, toxic, n.o.s.
3. **Transport hazard class(es):** : 6.1 Sub Class :



4. **Packing group:** III
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

### Road (ADR)

1. **UN Number:** 3276
2. **Shipping Name:** NITRILES, LIQUID, TOXIC, N.O.S (5-Bromovaleronitrile).
3. **Transport hazard class(es):** : 6 Sub Class :



4. **Packing group:** III
5. **Environmental hazards:**

**6. Special Precautions for user:**

**7. Transport in bulk:**

**Sea (IMDG)**

**1. UN Number:** 3276

**2. Shipping Name:** Nitriles, liquid, toxic, n.o.s.

**3. Transport hazard class(es):** : 6.1 Sub Class :



**4. Packing group:** III

**5. Environmental hazards:**

**6. Special Precautions for user:**

**7. Transport in bulk:** IBCINS: IBC03  
IBCPPROV: -  
UNTANKINS: -  
TANKPROV: TP1, TP28

**15. Safety, health, environmental and national regulations**

**1. Safety, health, environmental and national regulations:**

product is not subject to any additional regulations or provisions

**2. Safety Assessment**

No Chemical Safety Assessment

**16. Other Information**

**1. Other Information:**

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

**2. Associated risk phrases according to European directive 67/548/EEC**

**3. Disclaimer**

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.