

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **Hydrazine hydrochloride**
Product Code 227701
CAS Number 2644-70-4
Other Names Hydrazine monohydrochloride
Hydrazinium Monochloride
IUPAC
MFCD Number MFCD00044368
EC/EINECS 220-154-4
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	
H314	Skin Corr. 1B	
H317	Skin Sens. 1	
H331	Acute Tox. 3	
H350	Carc. 1B	
H400	Aquatic Acute 1	
H410	Aquatic Chronic 1	

2. Label elements

Signal Word **Danger**



Hazard Statements

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H350	May cause cancer ..
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Phrases

P202	Do not handle until all safety precautions have been read and understood.
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P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

3. Composition / Information on Ingredients

1. Substances

Product Name	Hazards	Concentration
Hydrazine hydrochloride		
CAS Number: 2644-70-4 EC/EINECS: 220-154-4	H301, H311, H314, H317, H331, H350, H400, H410 Acute Tox. 3, Aquatic Acute 1, Aquatic Chronic 1, Carc. 1B, Skin Corr. 1B, Skin Sens. 1	<=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

P391: Collect spillage.
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.
P273: Avoid release to the environment.

Protection against explosions and fires P202: Do not handle until all safety precautions have been read and understood.
P272: Contaminated work clothing should not be allowed out of the workplace.
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.

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.
P281: Use personal protective equipment as required.
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	No Data Available
Odour	No Data Available
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	89 °C - lit.
Initial boiling point and boiling range	No Data Available
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	No Data Available
Solubility(ies):	Water
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

no unusual reactivity

2. Stability

Stable under normal conditions.

3. Possibility of Hazardous Reactions

May explosively decompose on heating, shock, friction, etc.

4. Conditions to Avoid

Heat, Shock, Friction

5. Incompatible Materials

Oxidising agents.
Bases.

6. Hazardous Decomposition Products

In combustion emits toxic fumes.
In combustion emits toxic fumes of nitrogen oxides.
In combustion emits toxic fumes of hydrogen chloride / phosgene.

11. Toxicology information

1. Information

<i>Acute Toxicity</i>	LD50 Oral - rat - 128 mg/kg Remarks: Behavioral:Convulsions or effect on seizure threshold. LD50 Orl - mus - 126 mg/kg
<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>	sce-ham-Ing 500 umol/L slt-mus-ipr 80 mg/kg
<i>Carcinogenicity</i>	Possible human carcinogen
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	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.
Very toxic to aquatic life with long lasting effects.

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:** 3290
2. **Shipping Name:** Toxic solid, corrosive, inorganic, n.o.s.
3. **Transport hazard class(es):** : 6.1 Sub Class : 8





4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**

7. Transport in bulk:

Road (ADR)

1. **UN Number:** 3290
2. **Shipping Name:** TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S (Hydrazine hydrochloride).
3. **Transport hazard class(es):** : 6 Sub Class :

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

Sea (IMDG)

1. **UN Number:** 3290
2. **Shipping Name:** Toxic solid, corrosive, inorganic, n.o.s.
3. **Transport hazard class(es):** : 6.1 Sub Class : 8

4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:** IBCINS: IBC06
IBCPPROV: B21
UNTANKINS: -
TANKPROV: TP33

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.