

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **Pentanoic acid**
Product Code 066625
CAS Number 109-52-4
Other Names Valeric Acid
IUPAC
MFCD Number MFCD00004413
EC/EINECS 203-677-2
REACH Number

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

H314	Skin Corr. 1B	R34, R23/34/35
H412	Aquatic Chronic 3	R52/53

No Resource File

2. Label elements

Signal Word **Danger**



Hazard Statements

H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Phrases

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P310	Immediately call a POISON CENTER or doctor/physician.
P501	Dispose of contents/container to local regulations

3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

3. Composition / Information on Ingredients

1. Substances

Pentanoic acid

Assay:100% CAS Number :109-52-4

2. Mixtures

Not Relevant

4. First Aid Measures

1. Description of first aid measures

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

Eye Contact P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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

Severe burns may occur.

3. Indication of any immediate medical attention

P310: Immediately call a POISON CENTER or doctor/physician.
No additional measures required

5. Firefighting measures

1. Extinguishing Media

Suitable Carbon dioxide.
Dry chemical powder.
sand

Unsuitable Do not use water.

2. Special Hazards arising from the substance or mixture

Corrosive.

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

Refer to section 8 of SDS for personal protection details.

2. Environmental Precautions

Do not discharge into drains or rivers.

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.
 Wash hands immediately after contamination.
 P264: Wash hands thoroughly after handling.
 P273: Avoid release to the environment.

Protection against explosions and fires 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.
 Avoid contact with water or humidity.

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 no further information available

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.

Engineering measures Ensure there is sufficient ventilation of the area.

Eye / Face Protection Safety Glasses with side-shields.

Hand protection Appropriate impermeable gloves.

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

Skin protection Handle with appropriate gloves.
 Gloves must be inspected prior to use.
 Use proper glove removal technique to avoid skin contact with this product.
 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	Clear colourless to slightly pale yellow liquid
Odour	No Data Available
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	-18°C
Initial boiling point and boiling range	186°C
Flash point	96°C

Evaporation rate	No Data Available
Flammability(solid,gas)	No Data Available
Upper/lower flammability or explosive limits	Upper: 7.6% / Lower: 1.6%
Vapour pressure	20Pa/20°C
Vapour density	3.5
Relative density	0.94
Solubility(ies):	No Data Available
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	360°C
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

no hazardous reactions known

4. Conditions to Avoid

Moist Air.

5. Incompatible Materials

Oxidising agents.
Water.
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>	ivn-mus LD50:1290 mg/kg orl-mus LD50:600 mg/kg ihl-mus LC50:4100 mg/m ³ /2H
<i>Skin corrosion/irritation</i>	strong corrosive effect on skin and mucous membranes
<i>Serious eye Damage/irritation</i>	strong corrosive 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

Harmful to aquatic life with long lasting effects
Class 1 - Low hazard to waters

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:** 3265
2. **Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (Pentanoic acid)
3. **Transport hazard class(es):** : 8 **Sub Class :**



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

Road (ADR)

1. **UN Number:** 3265
2. **Shipping Name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
3. **Transport hazard class(es):** : 8 **Sub Class :**



4. **Packing group:** III

- 5. **Environmental hazards:**
- 6. **Special Precautions for user:**
- 7. **Transport in bulk:**

Sea (IMDG)

- 1. **UN Number:** 3265
- 2. **Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (Pentanoic acid)
- 3. **Transport hazard class(es) :** 8 **Sub Class :**



- 4. **Packing group:** III
- 5. **Environmental hazards:**
- 6. **Special Precautions for user:**
- 7. **Transport in bulk:** IBCINS: IBC03

UNTANKINS: T7
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

R34	Causes burns.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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.