Adamantane (cas 281-23-2) MSDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name : adamantane

Product Number : 100277
Brand : 
CAS-No. : 281-23-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute aquatic toxicity (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Very toxic to aquatic organisms.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word Warning

Hazard statement(s)
H400 Very toxic to aquatic life.

Precautionary statement(s)
P273 Avoid release to the environment.

Supplemental Hazard Statements none


Hazard symbol(s)

- 100277 R-phrase(s)
R50 Very toxic to aquatic organisms.

S-phrase(s)
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : C10H16
Molecular Weight : 136.23 g/mol

Component Concentration
Adamantane
CAS-No. 281-23-2
EC-No. 206-001-4

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end uses
No data available

8. EXPOSURE CONTROLS/PERSOONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. 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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**
impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1 **Information on basic physical and chemical properties**

a) Appearance
   - Form: crystalline
   - Colour: beige
b) Odour
   - no data available
c) Odour Threshold
   - no data available

- 100277
d) pH
   - no data available
e) Melting point/freezing point
   - Melting point/range: 209 - 212 °C
f) Initial boiling point and boiling range
   - no data available
g) Flash point
   - no data available
h) Evaporation rate
   - no data available
i) Flammability (solid, gas)
   - no data available
j) Upper/lower flammability or explosive limits
   - no data available
k) Vapour pressure
   - no data available
l) Vapour density
   - no data available
m) Relative density
   - no data available
n) Water solubility
   - no data available
o) Partition coefficient: n-octanol/water
   - no data available
p) Autoignition temperature
   - no data available
q) Decomposition temperature
   - no data available
r) Viscosity
   - no data available
s) Explosive properties
   - no data available
t) Oxidizing properties
   - no data available

9.2 **Other safety information**
no data available

10. **STABILITY AND REACTIVITY**

10.1 **Reactivity**
no data available

10.2 **Chemical stability**
no data available

10.3 **Possibility of hazardous reactions**
no data available

10.4 **Conditions to avoid**
no data available

10.5 **Incompatible materials**
Strong oxidizing agents

10.6 **Hazardous decomposition products**
Other decomposition products - no data available

11. **TOXICOLOGICAL INFORMATION**

11.1 **Information on toxicological effects**
Acute toxicity
no data available

Skin corrosion/irritation
Serious eye damage/eye irritation
Eyes - rabbit - Mild eye irritation
Respiratory or skin sensitization
no data available

Germ cell mutagenicity
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
Specific target organ toxicity - single exposure
Specific target organ toxicity - repeated exposure

Aspiration hazard
Potential health effects
- Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
- Ingestion: May be harmful if swallowed.
- Skin: May be harmful if absorbed through skin. May cause skin irritation.
- Eyes: Causes eye irritation.

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION
12.1 Toxicity
Toxicity to fish
LC50 - Pimephales promelas (fathead minnow) - 0.285 mg/l - 96 h

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
Very toxic to aquatic life.
no data available

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION
14.1 UN number
ADR/RID: 3077  
IMDG: 3077  
IATA: 3077

14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Adamantane)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Adamantane)
IATA: Environmentally hazardous substance, solid, n.o.s. (Adamantane)

14.3 Transport hazard class(es)
ADR/RID: 9  
IMDG: 9  
IATA: 9

14.4 Packaging group
ADR/RID: III  
IMDG: III  
IATA: III

14.5 Environmental hazards
ADR/RID: yes  
IMDG Marine pollutant: yes  
IATA: yes

14.6 Special precautions for user
Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION
Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.