1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name : Nimustine (hydrochloride)
Catalog No. : HY-13703A
CAS No. : 55661-38-6

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

Identified uses : Laboratory chemicals, manufacture of substances.

1.3 Details of the supplier of the safety data sheet

Company: MedChemExpress USA
Tel: 609-228-6898
Fax: 609-228-5909
E-mail: sales@medchemexpress.com

1.4 Emergency telephone number

Emergency Phone #: 609-228-6898

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral (Category 4), H302
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word No data available
Hazard statement(s)
H302 Harmful if swallowed.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P391 Collect spillage.
P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Other hazards
None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Synonyms: | ACNU |
| Formula: | C9H14Cl2N6O2 |
| Molecular Weight: | 309.15 |
| CAS No.: | 55661-38-6 |

4. FIRST AID MEASURES

4.1 Description of first aid measures

**Eye contact**
Remove any contact lenses, locate eye-wash station, and flush eyes immediately with large amounts of water. Separate eyelids with fingers to ensure adequate flushing. Promptly call a physician.

**Skin contact**
Rinse skin thoroughly with large amounts of water. Remove contaminated clothing and shoes and call a physician.

**Inhalation**
Immediately relocate self or casualty to fresh air. If breathing is difficult, give cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.

**Ingestion**
Wash out mouth with water; Do NOT induce vomiting; call a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2).

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

**Suitable extinguishing media**
Use water spray, dry chemical, foam, and carbon dioxide fire extinguisher.

5.2 Special hazards arising from the substance or mixture
During combustion, may emit irritant fumes.

5.3 Advice for firefighters
Wear self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use full personal protective equipment. Avoid breathing vapors, mist, dust or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Refer to protective measures listed in sections 8.

6.2 Environmental precautions
Try to prevent further leakage or spillage. Keep the product away from drains or water courses.
6.3 Methods and materials for containment and cleaning up
Absorb solutions with finely-powdered liquid-binding material (diatomite, universal binders); Decontaminate surfaces and equipment by scrubbing with alcohol; Dispose of contaminated material according to Section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid inhalation, contact with eyes and skin. Avoid dust and aerosol formation. Use only in areas with appropriate exhaust ventilation.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly sealed in cool, well-ventilated area. Keep away from direct sunlight and sources of ignition.
Recommended storage temperature: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)
Shipping at room temperature if less than 2 weeks.

7.3 Specific end use(s)
No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
This product contains no substances with occupational exposure limit values.

8.2 Exposure controls
Engineering controls
Ensure adequate ventilation. Provide accessible safety shower and eye wash station.

Personal protective equipment

<table>
<thead>
<tr>
<th>Protection</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye protection</td>
<td>Safety goggles with side-shields.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Protective gloves.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Impervious clothing.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Suitable respirator.</td>
</tr>
<tr>
<td>Environmental exposure</td>
<td>Keep the product away from drains, water courses or the soil. Clean spillages in a safe way as soon as possible.</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White to off-white (Solid)</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Relative density  No data available
Water Solubility  No data available
Partition coefficient  No data available
Auto-ignition temperature  No data available
Decomposition temperature  No data available
Viscosity  No data available
Explosive properties  No data available
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
   Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
   No data available.

10.4 Conditions to avoid
   No data available.

10.5 Incompatible materials
   Strong acids/alkalis, strong oxidising/reducing agents.

10.6 Hazardous decomposition products
   Under fire conditions, may decompose and emit toxic fumes.
   Other decomposition products - no data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
   Acute toxicity
   Classified based on available data. For more details, see section 2
   Skin corrosion/irritation
   Classified based on available data. For more details, see section 2
   Serious eye damage/irritation
   Classified based on available data. For more details, see section 2
   Respiratory or skin sensitization
   Classified based on available data. For more details, see section 2
   Germ cell mutagenicity
   Classified based on available data. For more details, see section 2
   Carcinogenicity
   IARC: No component of this product present at a level equal to or greater than 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
   ACGIH: No component of this product present at a level equal to or greater than 0.1% is identified as a potential or confirmed carcinogen by ACGIH.
   NTP: No component of this product present at a level equal to or greater than 0.1% is identified as a anticipated or confirmed
OSHA: No component of this product present at a level equal to or greater than 0.1% is identified as a potential or confirmed carcinogen by OSHA.

Reproductive toxicity
Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure
Classified based on available data. For more details, see section 2

Specific target organ toxicity - repeated exposure
Classified based on available data. For more details, see section 2

Aspiration hazard
Classified based on available data. For more details, see section 2

Additional information
This information is based on our current knowledge. However the chemical, physical, and toxicological properties have not been completely investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment unavailable as chemical safety assessment not required or not conducted.

12.6 Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Dispose substance in accordance with prevailing country, federal, state and local regulations.

Contaminated packaging
Conduct recycling or disposal in accordance with prevailing country, federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (US)
This substance is considered to be non-hazardous for transport.

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Marine pollutant: Marine pollutant
IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s.

15. REGULATORY INFORMATION

SARA 311/312 Hazards:
Acute Health Hazard.

16. OTHER INFORMATION

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Caution: Product has not been fully validated for medical applications. For research use only.

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