Section 1 - Product and Company Information

Product Name: 3-DIMETHYLAMINO-1-PROPYL CHLORIDE
Product Number: 39390
Brand: FLUKA

Company: Sigma-Aldrich Canada, Ltd
Address: 2149 Winston Park Drive
          Oakville ON L6H 6J8 CA
Technical Phone: 9058299500
Fax: 9058299292
Emergency Phone: 800-424-9300

Section 2 - Composition/Information on Ingredient

Substance Name: 3-(DIMETHYLAMINO)PROPYL CHLORIDE HYDRO-CHLORIDE
CAS #: 5407-04-5
SARA 313: No

Formula: C5H12ClN.ClH
Synonyms: 3-Chloro-N,N-dimethyl-1-propylamine hydrochloride
          * Dimethylaminopropyl chloride, hydrochloride
RTECS Number: UI0209950

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Toxic (USA) Harmful (EU).
Harmful if swallowed. Irritating to eyes, respiratory system and skin.

HMIS RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 1

NFPA RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
DERMAL EXPOSURE
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
N/A

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Mechanical exhaust required. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are
appropriate use a full-face particle respirator type N99 (US) or
type P2 (EN 143) respirator cartridges as a backup to engineering
controls. If the respirator is the sole means of protection, use a
full-face supplied air respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>158.07 AMU</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>BP/BP Range</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>MP/MP Range</td>
<td>140 °C</td>
<td></td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Saturated Vapor Conc.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>SG/Density</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Bulk Density</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Volatile%</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>VOC Content</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Water Content</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Solvent Content</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Surface Tension</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temp.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Refractive Index</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Optical Rotation</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Data</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Conditions to Avoid: Moisture.
Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide,
Nitrogen oxides, Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur
Section 11 - Toxicological Information

ROUTE OF EXPOSURE
- Skin Contact: Causes skin irritation.
- Skin Absorption: May be harmful if absorbed through the skin.
- Eye Contact: Causes eye irritation.
- Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
- Ingestion: Harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)
- Central nervous system.

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
- Proper Shipping Name: None
- Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
- Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION
- Symbol of Danger: Xn
- Indication of Danger: Harmful.
- R: 22-36/37/38
- Risk Statements: Harmful if swallowed. Irritating to eyes, respiratory system and skin.
- S: 26
- Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US CLASSIFICATION AND LABEL TEXT
- Indication of Danger: Toxic (USA) Harmful (EU).
- Risk Statements: Harmful if swallowed. Irritating to eyes, respiratory system and skin.
- Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

UNITED STATES REGULATORY INFORMATION
- SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
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 in this document is based on the present 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. Sigma-Aldrich Inc., 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.
Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.