SAFETY DATA SHEET

Preparation Date: 2/20/2019  Revision date: 2/20/2019  Revision Number: G2

1. IDENTIFICATION

Product identifier

<table>
<thead>
<tr>
<th>Product code:</th>
<th>D2593</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name:</td>
<td>DIETHYLAMINE HYDROCHLORIDE</td>
</tr>
</tbody>
</table>

Other means of identification

| Synonyms: | Ethanamine, N-ethyl-, hydrochloride (9CI)  
Diethyiammonium chloride  
N-Ethylethanamine hydrochloride |
| CAS #: | 660-68-4 |
| RTECS #: | IA3084000 |
| CI#: | Not available |

Recommended use of the chemical and restrictions on use

| Recommended use: | No information available. |
| Uses advised against | No information available |

Supplier:

Spectrum Chemical Mfg. Corp  
14422 South San Pedro St.  
Gardena, CA  90248  
(310) 516-8000

Order Online At: [https://www.spectrumchemical.com](https://www.spectrumchemical.com)  
Emergency telephone number | Chemtrec 1-800-424-9300  
Contact Person: | Tom Tyner (USA - West Coast)  
Contact Person: | Ibad Tirmiz (USA - East Coast) |

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label elements

Warning

Hazard statements

Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation
Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Not available

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylamine Hydrochloride</td>
<td>660-68-4</td>
<td>100</td>
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</tbody>
</table>

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an
unconscious person. Obtain medical attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**
- Causes serious eye irritation
- Causes skin irritation
- Irritating to respiratory system
- May cause digestive (gastrointestinal) tract irritation
- May affect respiration
- Chronic exposure may affect the kidneys
- May affect the liver

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:**
- Dry chemical.
- Carbon dioxide (CO2).
- Water spray mist or foam.

**Unsuitable Extinguishing Media:**
No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products**
- Carbon monoxide.
- Carbon dioxide (CO2).
- Nitrogen oxides (NOx).
- Hydrogen chloride.

**Specific hazards**
- May be combustible at high temperatures.

**Special Protective Actions for Firefighters**

**Specific Methods:**
No information available.

**Special Protective Equipment for Firefighters:**
- As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**Product code:** D2593  
**Product name:** DIETHYLAMINE HYDROCHLORIDE
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Remove all sources of ignition.

Environmental precautions: Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment: Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up: Use appropriate tools to put the spilled solid in a suitable waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Technical Measures/Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Use only in well-ventilated areas. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities


Incompatible Materials: Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WEEL</th>
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<td>660-68-4</td>
<td>None</td>
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</table>

Canada

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Canada - Alberta</th>
<th>Canada - British Columbia</th>
<th>Canada - Ontario</th>
<th>Canada - Quebec</th>
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<td>660-68-4</td>
<td>None</td>
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<td>None</td>
<td>None</td>
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</tbody>
</table>

Product code: D2593
Product name: DIETHYLAMINE HYDROCHLORIDE
### Appropriate engineering controls

**Engineering measures to reduce exposure:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

**Personal Protective Equipment**

**Eye protection:** Goggles or Safety glasses with side-shields.

**Skin and body protection:**
- Long sleeved clothing
- Chemical resistant apron
- Gloves

**Respiratory protection:** Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td><strong>Physical state:</strong></td>
<td>Solid</td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td>Crystals. Crystalline.</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Odorless.</td>
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<tr>
<td><strong>Taste</strong></td>
<td>No information available.</td>
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<tr>
<td><strong>Molecular/Formula weight (g/mole):</strong></td>
<td>109.60</td>
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<tr>
<td><strong>Flammability (solid, gas):</strong></td>
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<tr>
<td><strong>Flashpoint (°C/°F):</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Autoignition Temperature (°C/°F):</strong></td>
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<tr>
<td><strong>Lower Explosion Limit (%):</strong></td>
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<tr>
<td><strong>Upper Explosion Limit (%):</strong></td>
<td>No information available</td>
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<td><strong>Boiling point/range(°C/°F):</strong></td>
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<tr>
<td><strong>Density (g/cm3):</strong></td>
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<tr>
<td><strong>Specific gravity:</strong></td>
<td>1.0477</td>
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<tr>
<td><strong>pH</strong></td>
<td>No information available</td>
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<tr>
<td><strong>Vapor pressure @ 20°C (kPa):</strong></td>
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</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur


Incompatible Materials: Oxidizing agents


Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Inhalation. Ingestion.

Acute Toxicity

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50/oral/rat</th>
<th>LD50/oral/mouse</th>
<th>LD50/dermal/rabbit</th>
<th>LD50/dermal/rat</th>
<th>LC50/inhalation/rat</th>
<th>LC50/inhalation/mouse</th>
<th>Other LD50 or LC50 information</th>
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<tr>
<td>Diethylamine Hydrochloride</td>
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<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
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</tbody>
</table>

Product Information

**Product code:** D2593  **Product name:** DIETHYLAMINE HYDROCHLORIDE
LD50/oral/rat = Value - Acute Tox = >1000 mg/kg

LD50/oral/mouse = Value - Acute Tox Oral = No information available

LD50/dermal/rabbit Value - Acute Tox = No information available

LD50/dermal/rat VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms
Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Inhalation Irritating to respiratory system.

Ingestion May cause digestive (gastointestinal) tract irritation. May affect respiration. It may cause twitching or tremors/trembling.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Chronic exposure may affect the liver and kidneys.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>IARC</th>
<th>ACGIH - Carcinogens</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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<tbody>
<tr>
<td>Diethylamine Hydrochloride</td>
<td>660-68-4</td>
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<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
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</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Product code: D2593  Product name: DIETHYLAMINE HYDROCHLORIDE
Reproductive toxicity
No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Ecotoxicity effects: No data available.

Persistence and degradability: No information available
Bioaccumulative potential: No information available.
Mobility in soil No information available
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>660-68-4</td>
<td>None</td>
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<td>None</td>
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</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions No Information available

Product code: D2593
Product name: DIETHYLAMINE HYDROCHLORIDE
Symbol(s): No information available
Description: No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant: No Information available
Description: No information available

ADR
UN Number: Not regulated
Proper Shipping Name: No information available
Transport hazard class(es): No information available
Packing group: No information available
Subsidiary Risk: No information available

IMDG
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant: No information available

RID
UN Number: Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es): No information available
Subsidiary Risk: No information available
Packing group: No information available

ICAO (air)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA
UN Number: Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es): No information available
Subsidiary Risk: No information available
Packing group: No information available
Precautionary Statements - Response: IF exposed or concerned
Special Provisions: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>China IECSC</th>
<th>Australia AICS</th>
<th>EINECS-No.</th>
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<tbody>
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<td>Product code: D2593</td>
<td>Product name: DIETHYLAMINE HYDROCHLORIDE</td>
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</tbody>
</table>
**U.S. Regulations**

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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<tbody>
<tr>
<td>Diethylamine Hydrochloride</td>
<td>660-68-4</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
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</table>

**CERCLA/SARA**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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<tbody>
<tr>
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<td>660-68-4</td>
<td>None</td>
<td>None</td>
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**U.S. TSCA**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
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</thead>
<tbody>
<tr>
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<td>660-68-4</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
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</table>

**Canada**

**WHIMIS 2015 - GHS Classifications**

**WHIMIS 2015 Hazard Classification Information:** The WHMIS 2015 classification of this product has not been validated or reviewed yet.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

**DSL/NDSL**

<table>
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<th>CAS No</th>
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<th>Canada (NDSL)</th>
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<table>
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<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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**Product code:** D2593

**Product name:** DIETHYLAMINE HYDROCHLORIDE
EU Classification

EU GHS - SV - CLP 1272/2008

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<tbody>
<tr>
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<td>660-68-4</td>
</tr>
</tbody>
</table>

EU - CLP (1272/2008)

R-phrase(s)
R36/37/38 - Irritating to eyes, respiratory system and skin

S-phrase(s)
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S27 - Take off immediately all contaminated clothing
S28 - After contact with skin, wash immediately with plenty of water

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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<td>660-68-4</td>
<td>No information</td>
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</tr>
</tbody>
</table>

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Xi - Irritant

16. OTHER INFORMATION

Preparation Date: 2/20/2019
Revision date 2/20/2019
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on

Product code: D2593
Product name: DIETHYLAMINE HYDROCHLORIDE
technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet