1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier
Product name DMAPA (3-Dimethylaminopropylamine)

Other means of identification
Product code 51101
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended use Chemical intermediate.
Uses advised against No information available

Details of the Supplier of the Safety Data Sheet
Supplier Address Taminco US LLC
A subsidiary of Eastman Chemical Company
Two Windsor Plaza, Suite 411
7540 Windsor Drive
Allentown, PA USA 18195
T: +(800) 223-3258

Manufacturer Address Taminco US LLC
3790 Highway 30
St Gabriel, La USA 70776
(800) 223-3258

Emergency telephone number
Emergency Telephone
In case of emergency call CHEMTREC 1-800-424-9300
for International calls 1-703-527-3887

2. Hazards Identification

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Dermal</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>FLAMMABLE LIQUIDS</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label Elements

Symbols/Pictograms

Signal Word DANGER
hazard statements
HARMFUL IF SWALLOWED
Harmful in contact with skin
Causes severe skin burns and eye damage
May cause respiratory irritation
May cause an allergic skin reaction
Flammable liquid and vapor

Precautionary Statement - Prevention
Keep away from heat/sparks/open flames/hot surfaces - no smoke
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Use explosion-proof equipment
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace
Do not eat, drink or smoke when using this product
In case of inadequate ventilation wear respiratory protection

Precautionary Statements - Response
Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Call a POISON CENTER or doctor/physician if you feel unwell
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

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

Precautionary Statements - Disposal
P501 - Dispose of contents/container in accordance with local regulation

Hazards Not Otherwise Classified (HNOC)
Not Applicable

3. Composition/information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-(Dimethylamino)-propylamine</td>
<td>109-55-7</td>
<td>&gt;99</td>
<td>No</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures

First Aid Measures
General advice
If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

Eye contact
Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before re-use.

Inhalation
Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician or Poison Control Centre immediately.

Ingestion
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician or Poison Control Centre immediately.

Protection of First-aiders
Use personal protective equipment.

Most Important Symptoms and Effects, Both Acute and Delayed
See Section 11: TOXICOLOGICAL INFORMATION.

Indication of Any Immediate Medical Attention and Special Treatment Needed
Treat symptomatically.

5. Fire-fighting measures

Unsuitable extinguishing media
No information available.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge yes.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes and clothing. Wear suitable protective clothing, gloves and eye/face protection. Wear respiratory protection.

Environmental Precautions
See Section 12 for additional Ecological Information. Remove immediately adhering matter. Hose down gases, fumes and/or dust with water. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up
Use explosion-proof equipment. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Large spills should be collected mechanically (remove by pumping) for disposal. Keep in suitable, closed containers for disposal. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

7. Handling and Storage
Precautions for Safe Handling

Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapours or spray mist. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

incompatible materials Strong acids and oxidizing agents.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-(Dimethylamino)-propylamine</td>
<td>Not Listed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>109-55-7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IDLH: Immediately Dangerous to Life or Health

8. Exposure Controls/Personal Protection

Appropriate Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear a positive-pressure supplied-air respirator with full facepiece. Face-shield.

Skin and Body Protection Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection If irritation is experienced, NIOSH approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>VALUES</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>appearance</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>color</td>
<td>colorless</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Amine-like</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>12.2 (at 100 g/l, 20°C)</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-70 °C / -94 °F</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>135.1 °C / 275 °F</td>
<td></td>
</tr>
<tr>
<td>flash point</td>
<td>30.5 °C / 87 °F</td>
<td></td>
</tr>
<tr>
<td>evaporation rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability limit in air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>1.3 vol%</td>
<td></td>
</tr>
<tr>
<td>vapor pressure</td>
<td>5.9 hPa @20°C/68°F</td>
<td></td>
</tr>
<tr>
<td>vapor density</td>
<td>3.50 (Air =1.0)</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.8133</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>miscible</td>
<td></td>
</tr>
<tr>
<td>Solubility in Other Solvents</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
Partition coefficient
Autoignition temperature
Decomposition temperature
Kinematic viscosity
Dynamic viscosity
Explosive properties
Oxidizing properties

**OTHER INFORMATION**

- Molecular weight: No information available
- VOC Content: No information available
- Density: 0.8133 g/cm³ @ 25 °C / 77 °F

## 10. Stability and Reactivity

### Reactivity

- See Incompatible Materials

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Hazardous polymerization

Hazardous polymerization does not occur.

### Conditions to avoid

Heat, flames and sparks. Exposure to air or moisture over prolonged periods.

### Incompatible materials

- Strong acids and oxidizing agents.

### Hazardous decomposition products

- Heating or fire can release toxic gas. Nitrogen oxides (NOx). Carbon monoxide.

## 11. Toxicological Information

### Symptoms related to the physical, chemical and toxicological characteristics

Harmful by inhalation, in contact with skin and if swallowed.

### Product information

- LD₅₀/oral/rat = 410 mg/kg
- LD₅₀/dermal/rabbit = 2138.7 mg/kg
- LC₅₀/inhalation/4h/rat = > 4.31 mg/l
- Eye irritation: Corrosive, Risk of serious damage to eyes
- Skin irritation: Corrosive, Causes burns
- Sensitization: May cause sensitization of susceptible persons
- Mutagenic effects: Did not show mutagenic effects in animal experiments
- Reproductive Toxicity: No known effect
- Carcinogenic effects: Not expected
- Specific target organ systemic toxicity (single exposure): No information available
- Specific target organ systemic toxicity (repeated exposure): No observed adverse effect level: 50 mg/kg/d, after 28 days
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-(Dimethylamino)-propylamine 109-55-7 ( &gt;99 )</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

**Chronic toxicity**

Avoid repeated exposure. Possible risks of irreversible effects. Repeated contact may cause allergic reactions in very susceptible persons.

### 12. Ecological Information

**Ecotoxicity**

**Product information**

**Toxicity to Fish**

- LC50 : 122 mg/l

**EC50/48h/daphnia** = 59.5 mg/l

**EC50/72h/algae** = 53.5 mg/l

**EC50 / Tox Bacteria**

- Pseudomonas putida EC10 (17 hour) : 69.5 mg/l

**Persistency/Degradability**

According to the results of tests of biodegradability this product is considered as being readily biodegradable.

**Bioaccumulative potential**

**Mobility in Soil**

**Koc** = 73.36

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-(Dimethylamino)-propylamine 109-55-7</td>
<td>-0.352</td>
</tr>
</tbody>
</table>

**Other Adverse Effects**

None known based on information supplied

### 13. Disposal Considerations

**Waste Treatment Methods**

**Waste Disposal Method**

Dispose of in accordance with local regulations.

**Contaminated packaging**

Empty containers should be taken for local recycling, recovery or waste disposal.

### 14. Transport Information

**DOT**

**Shipping Description**

- UN2734, Amines, liquid, corrosive, flammable, n.o.s. (3-Dimethylaminopropylamine), 8 (3), PG II

**Hazard class**

- 8

**Subsidiary class**

- 3

**Packing group**

- II

**IATA**

**UN-No**

- UN 2734

**Proper shipping name**

- Amines, liquid, corrosive, flammable, n.o.s. (3-Dimethylaminopropylamine)

**Hazard class**

- 8

**Subsidiary class**

- 3

**Packing group**

- II

**Marine pollutant**

- No
15. Regulatory Information

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend:
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

Federal Regulations

SARA TITLE III SECTION 313 INFORMATION:
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazardous

Categorization

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

State Regulations

California Proposition 65
No Data Available

State Right-to-Know

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>NJ</th>
<th>Ma</th>
<th>Pa</th>
</tr>
</thead>
</table>

PAGE 7/8
### 3-(Dimethylamino)-propylamine  
**CAS Number**: 109-55-7

| U.S. EPA Pesticide registration number | X | X | X |

#### EPA Label information
- Not Applicable

#### WHMIS Hazard Class
- **B2** Flammable liquid
- **D1B** Toxic materials
- **E** Corrosive material

#### CANADA
- This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

### 16. Other Information

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HEALTH 3</th>
<th>FIRE 3</th>
<th>Instability 0</th>
<th>Physical hazard -</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>HEALTH 3</td>
<td>flammability 3</td>
<td>Physical hazards 0</td>
<td></td>
</tr>
</tbody>
</table>

**Preparation Date**: 03-09-2010  
**Revision date**: 01-20-2016  
**Revision Summary**: Not Available

**Disclaimer:**
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**