# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>![NFPA Rating]</td>
<td>![HMIS Rating]</td>
<td>![Personal Protective Equipment]</td>
</tr>
</tbody>
</table>

| Health Hazard | 3 | | |
| Fire Hazard | 1 | | |
| Reactivity | 0 | | |

**Product code:** D1662  
**Product Name:** N,N-Dimethyldodecylamine  
**Chemical Name:** Dodecylamine, N,N-dimethyl-  
**Synonyms:**  
- 1-Dodecanamine, N,N-dimethyl-  
- ADMA 2  
- Antioxidant DDA  
- Armeen DM-12D  
- Barlene 125  
- DDA (corrosion inhibitor)  
- Dodecyldimethylamine  
- Farmin DM 20  
- IPL  
- Lauryldimethylamine  
- Monolauryl dimethylamine  
- N,N-Dimethyllaurylamine  
- N-Dodecyldimethylamine  
- N-Lauryldimethylamine  
- RC 5629  

**Recommended use:** Corrosion inhibitor  
Acid-stable emulsifier  
Cationic detergent  

**CAS #:** 112-18-5  
**Formula:** C14-H31-N  
**RTECS #** JR6600000  
**CI#:** Not available  

**Supplier:** Spectrum Chemicals and Laboratory Products, Inc.  
14422 South San Pedro St.  
Gardena, CA  90248  
(310) 516-8000  

**Emergency Telephone Number:** CHEMTREC: 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Chris Terpak (East Coast)
2. HAZARDS IDENTIFICATION

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

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:
Skin. Inhalation. Ingestion.

Acute Potential Health Effects:

Skin Contact:
Causes skin burns.

Eye Contact:
Causes eye burns.

Inhalation:
Causes chemical burns to the respiratory tract.

Ingestion:
Causes burns. Can burn mouth, throat, and stomach.

Chronic Potential Health Effects:

Target Organs:
No information available

Carcinogen Status:
No information available

Mutagenic Effects:
No information available

Teratogenic Effects:
No information available

Aggravated Medical Conditions:
No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethyldodecylamine</td>
<td>112-18-5</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Product code: D1662
Product name: N,N-Dimethyldodecylamine
**General Advice:**
Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

**Skin Contact:**
Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

**Eye Contact:**
Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Inhalation:**
Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Call a physician immediately.

**Ingestion:**
Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

**Notes to Physician:**
Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashpoint (°C/°F)</td>
<td>113-118 °C/235.4-244.4 °F</td>
</tr>
</tbody>
</table>

**Tested according to:** Not applicable CC

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Explosion Limit (%)</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper Explosion Limit (%)</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature (°C/°F)</td>
<td>No information available</td>
</tr>
</tbody>
</table>

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

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

**Hazardous Combustion Products:**
Carbon oxides, Nitrogen oxides

**Specific hazards:**
May be combustible at high temperatures. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. When heated to decomposition it may produce corrosive and/or toxic fumes.

**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:** D1662  
**Product name:** N,N-Dimethyldodecylamine
Specific Methods:
Water mist may be used to cool closed containers. For fires involving tanks or car/trailer load, cool containers with flooding quantities of water until well after the fire is out. Dike fire-control water for later disposal; do not scatter the material.

6. ACCIDENTAL RELEASE MEASURES

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

Environmental Precautions:
Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas.

Methods for Cleaning Up:
Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling

Technical Measures/Precautions:
Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

Safe Handling Advice:
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Storage

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Products:
Oxidizing agents. Acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Personal Protective Equipment

Eye protection: Face-shield.

Skin and body protection: Chemical resistant protective suit. Gloves.

Product code: D1662
Product name: N,N-Dimethyldodecylamine
Respiratory protection: Vapor respirator. 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.

National occupational exposure limits

**United States**
U.S Occupational Exposure Limits: Not determined

**Canada**
Canada Occupational Exposure Limits: Not determined

**Australia and Mexico**
Occupational Exposure Limits for Australia and Mexico: Not determined

---

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state: Liquid</td>
<td></td>
</tr>
<tr>
<td>Odor: Amine-like.</td>
<td></td>
</tr>
<tr>
<td>Flash point (°C) : 113</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature (°C/°F):</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range(°C/°F): -20 °C/- 4 °F</td>
<td>No information available</td>
</tr>
<tr>
<td>Density (g/cm3): No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor density: 7.36</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold (ppm): No information available</td>
<td></td>
</tr>
<tr>
<td>Appearance: No information available</td>
<td></td>
</tr>
<tr>
<td>Taste: No information available</td>
<td></td>
</tr>
<tr>
<td>Lower Explosion Limit (%): No information available</td>
<td></td>
</tr>
<tr>
<td>Upper Explosion Limit (%): No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature(°C/°F): No information available</td>
<td></td>
</tr>
<tr>
<td>Specific gravity: No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point/range(°C/°F): 110-112 °C/230-233.6 °F @ 3 mm Hg 270 °C/518 °F @ 760 mm Hg</td>
<td></td>
</tr>
<tr>
<td>Molecular weight: 213.41</td>
<td></td>
</tr>
<tr>
<td>pH: No information available</td>
<td></td>
</tr>
<tr>
<td>Odor threshold (ppm): No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): 4.5</td>
<td></td>
</tr>
<tr>
<td>Miscibility: No information available</td>
<td></td>
</tr>
<tr>
<td>Solubility: Insoluble in water</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions

Conditions to avoid: Heat. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Materials to avoid: Strong oxidising agents. Strong acids.


Product code: D1662  
Product name: N,N-Dimethyldodecylamine
Possibility of Hazardous Reactions: No information available

Polymerization: Hazardous polymerisation does not occur

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

*N,N-Dimethyldodecylamine - 112-18-5*

- \( LD_{50}/oral/rat = \text{c Oral LD} \) 50 Rat
- \( LD_{50}/oral/mouse = \text{No information available} \)
- \( LD_{50}/dermal/rabbit = \text{Not determined} \)
- \( LD_{50}/dermal/rat = \text{No information available} \)
- \( LC_{50}/inhalation/rat = \text{No information available} \)
- \( LC_{50}/inhalation/mouse = \text{No information available} \)

Product Information

- \( LC_{50}/inhalation/rat = \text{No information available} \)
- \( LC_{50}/Inhalation/mouse = \text{No information available} \)
- \( LD_{50}/dermal/rabbit = \text{No information available} \)
- \( LD_{50}/dermal/rat = \text{Not information available} \)
- \( LD_{50}/oral/rat = 740 \text{ mg/kg} \)
- \( LD_{50}/oral/mouse = \text{No information available} \)

Local Effects

- **Skin irritation:** Causes burns.
- **Eye irritation:** Corrosive to the eyes and may cause severe damage including blindness. Causes burns. May cause conjunctivitis. May cause corneal damage.
- **Inhalation:** Causes chemical burns to the respiratory tract.
- **Ingestion:** Causes digestive or gastrointestinal tract burns. May cause perforation of the digestive tract.
- **Sensitization:** No information available

Chronic Toxicity

- **Chronic Toxicity:** No information available
- **Carcinogenic effects:** No information available
- **Mutagenic Effects:** No information available

Product code: D1662  Product name: N,N-Dimethyldodecylamine
Reproductive Effects: No information available
Teratogenic Effects: No information available
Target Organs: No information available

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals: Information given is based on data on the components and the ecotoxicology of similar products

Ecotoxicity effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Aquatic toxicity:

*N,N-Dimethyldodecylamine - 112-18-5*

Freshwater Fish Species Data: 0.71-1 mg/L LC50 Brachydanio rerio 96 h static 1

Mobility: No information available
Persistence and degradability: No information available
Bioaccumulative potential: No information available

13. DISPOSAL CONSIDERATIONS

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>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethyldodecylamine</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

UN-No: UN2735
Proper Shipping Name: Amine, liquid, corrosive, n.o.s. (N,N-dimethyldodecylamine)
Hazard Class: 8
Packing Group: III
Subsidiary Risk: Not applicable
Marine Pollutant: No data available
ERG No: 153
DOT RQ (lbs): No information available
Symbol(s): G

TDG (Canada)

Proper Shipping Name: Amine, liquid, corrosive, n.o.s. (N,N-dimethyldodecylamine)
UN-No: UN2735
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available

Product code: D1662
Product name: N,N-Dimethyldodecylamine
ADR
Proper Shipping Name: Amine, liquid, corrosive, n.o.s.(N,N-dimethyldodecylamine)
UN-No: UN2735
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG
Proper Shipping Name: Amine, liquid, corrosive, n.o.s.(N,N-dimethyldodecylamine)
UN-No: UN2735
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID
Proper Shipping Name: Amine, liquid, corrosive, n.o.s.(N,N-dimethyldodecylamine)
UN-No: UN2735
Hazard Class: 8
Packing Group: III
Subsidiary Risk: 8
Classification Code: No information available
Description: No information available

ICAO
UN-No: UN2735
Hazard Class: 8
Proper Shipping Name: Amine, liquid, corrosive, n.o.s.(N,N-dimethyldodecylamine)
Packing Group: III
Subsidiary Risk: No information available
Description: No information available

IATA
Proper Shipping Name: Amine, liquid, corrosive, n.o.s.(N,N-dimethyldodecylamine)
UN-No: UN2735
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
ERG Code: 8L
Description: No information available

15. REGULATORY INFORMATION

International Inventories
U.S. Regulations


Chemicals Known to the State of California to Cause Cancer:
WARNING: This product contains a chemical known to the State of California to cause cancer. (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>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethyldodecylamine</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</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>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethyldodecylamine</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethyldodecylamine</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Canada

WHMIS hazard class:
E Corrosive material

<table>
<thead>
<tr>
<th>Components</th>
<th>WHMIS Ingredient Disclosure List -</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethyldodecylamine</td>
<td>1 %</td>
</tr>
</tbody>
</table>

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethyldodecylamine</td>
<td>Present</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

EU Classification

R-phrase(s)
R22 - Harmful if swallowed.
R34 - Causes burns.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Product code: D1662 Product name: N,N-Dimethyldodecylamine
**S -phrase(s)**
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
28A - After contact with skin, wash immediately with plenty of water.
S57 - Use appropriate container to avoid environmental contamination.
S60 - This material and its container must be disposed of as hazardous waste.
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

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

Contains: N,N-Dimethyldodecylamine

**Indication of danger:**
C - Corrosive.
N - Dangerous for the environment.

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1-2004 standards.

**Revision date:** 14-Apr-2010

**Reason for revision:** Not applicable

**Additional advice:** Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

**Prepared by:** Health & Safety

**Literature reference:** No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. The physical properties reported in this MSDS 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 MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**Product code:** D1662  
**Product name:** N,N-Dimethyldodecylamine