1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: N,N-Dimethylacetamide
Cat No.: AC115690000; AC115690010; AC115690025; AC115690050; AC115690250

Synonyms: No information available.
Recommended Use: Laboratory chemicals

2. HAZARDS IDENTIFICATION

Target Organs: Liver, Kidney, Central nervous system (CNS)

Potential Health Effects

Acute Effects
Principle Routes of Exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Irritating to eyes.</td>
</tr>
<tr>
<td>Skin</td>
<td>Harmful in contact with skin. May cause irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Harmful by inhalation. May cause irritation of respiratory tract.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.</td>
</tr>
</tbody>
</table>

Appearance: Colorless
Physical State: Liquid
Odor: Ammonia-like
Chronic Effects
None known.
See Section 11 for additional Toxicological information.

Aggravated Medical Conditions
Central nervous system disorders. Liver disorders. Skin disorders.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dimethyl acetamide</td>
<td>127-19-5</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

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

**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

**Ingestion**
Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Notes to Physician**
Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flash Point**
70°C / 158°F

**Method -**
No information available.

**Autoignition Temperature**
490°C / 914°F

**Explosion Limits**
- **Upper**
- **Lower**
11.5%
1.7%

**Suitable Extinguishing Media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

**Unsuitable Extinguishing Media**
No information available.

**Hazardous Combustion Products**
No information available.

- **Sensitivity to mechanical impact**
No information available.
- **Sensitivity to static discharge**
No information available.

**Specific Hazards Arising from the Chemical**
Combustible material. Containers may explode when heated.

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Handling
Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Do not breathe vapors/dust. Do not ingest. Take precautionary measures against static discharges.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep under nitrogen.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures
Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>TWA: 10 ppm</td>
<td>(Vacated) TWA: 10 ppm</td>
<td>IDLH: 300 ppm</td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td>(Vacated) TWA: 35 mg/m³ Skin</td>
<td>TWA: 10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 10 ppm</td>
<td>TWA: 35 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 35 mg/m³ STEL: 15 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL: 50 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Quebec</th>
<th>Mexico OEL (TWA)</th>
<th>Ontario TWAEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>TWA: 10 ppm</td>
<td>TWA: 10 ppm</td>
<td>TWA: 10 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA: 36 mg/m³ Skin</td>
<td>TWA: 35 mg/m³ STEL: 15 ppm</td>
<td>Skin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL: 50 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

| Eye/face Protection       | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| Skin and body protection  | Wear appropriate protective gloves and clothing to prevent skin exposure. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Respiratory Protection    |                                                                                          |

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Ammonia-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>4.0</td>
</tr>
<tr>
<td>pH at 200 g/l aq. sol.</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>1.7 mbar @ 25 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>3.02 (Air = 1.0)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1.02 mPa s @ 20 °C</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>164 - 166°C / 327.2 - 330.8°F @ 760 mmHg</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-20°C / -4°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>70°C / 158°F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>&lt;0.17 (Butyl Acetate = 1.0)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.937</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>87.12</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C₄H₉N O</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability

Hygroscopic.

Conditions to Avoid

Incompatible products. Excess heat. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials

Strong oxidizing agents

Hazardous Decomposition Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NOx)

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD₅₀ Oral Oral</th>
<th>LD₅₀ Dermal</th>
<th>LC₅₀ Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>4300 mg/kg (Rat)</td>
<td>2240 mg/kg (Rabbit)</td>
<td>2475 ppm (Rat) 1 h</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 g/kg (Rat)</td>
<td>8.81 mg/L (Rat) 1 h</td>
</tr>
</tbody>
</table>

Irritation

No information available.

Toxicologically Synergistic Products

No information available.

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product

Sensitization

No information available.

Mutagenic Effects

Not mutagenic in AMES Test
Reproductive Effects
May cause harm to the unborn child.

Developmental Effects
No information available.

Teratogenicity
No information available.

Other Adverse Effects
See actual entry in RTECS for complete information.

Endocrine Disruptor Information
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>EC50 &gt;500 mg/L/72h</td>
<td>500 mg/L LC50 96 h</td>
<td>EC50 = 2393 mg/L 30 min</td>
<td>EC50 &gt;500 mg/L/48h</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EC50 = 4815 mg/L 5 min</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability
Readily biodegradable.

Bioaccumulation/Accumulation
No information available.

Mobility

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>0.8</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT
Not regulated

TDG
Not regulated

IATA
Not regulated

IMDG/IMO
Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>CHINA</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>T</td>
<td>X</td>
<td>-</td>
<td>204-826-4</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA 12(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>Section 4</td>
</tr>
</tbody>
</table>

SARA 313
Not applicable

SARA 311/312 Hazardous Categorization

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</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>

Clean Water Act
Not applicable

Clean Air Act
Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not Applicable

California Proposition 65
This product does not contain any Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>127-19-5</td>
<td>Developmental</td>
<td>-</td>
</tr>
</tbody>
</table>

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl acetamide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant  N
DOT Severe Marine Pollutant  N

**U.S. Department of Homeland Security**
This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade**
Moderate risk, Grade 2

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**
- B3  Combustible liquid
- D2A Very toxic materials
- D2B Toxic materials

---

**16. OTHER INFORMATION**

**Prepared By**
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

**Creation Date**
06-Oct-2009

**Print Date**
12-Aug-2013

**Revision Summary**
(M)SDS sections updated, 2, 3.

**Disclaimer**
The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.
End of MSDS