

Section 1. Product and Company Identification

**Product Name** N,N-Dimethylacetamide  
**CAS Number** 127-19-5

**Parchem - fine & specialty chemicals**

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EMERGENCY RESPONSE NUMBER  
CHEMTEL

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Section 2. Hazards Identification

**Classification of the substance or mixture**

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 4): H227

Acute toxicity, Inhalation (Category 4): H332

Acute toxicity, Dermal (Category 4): H312

Eye irritation (Category 2A): H319

Reproductive toxicity (Category 1B): H360

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard statements**

H227: Combustible liquid.

H312 + H332: Harmful in contact with skin or if inhaled

H319: Causes serious eye irritation.

H360: May damage fertility or the unborn child.

**Precautionary statements**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P264: Wash skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P302 + P352 + P312: If on Skin, wash with plenty of soap and water. Call a poison center or doctor/ physician if you feel unwell.  
 P304 + P340 + P312: If Inhaled, remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.  
 P305 + P351 + P338: If in Eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308 + P313: If exposed or concerned: Get medical advice/attention.  
 P337 + P313: If eye irritation persists: Get medical advice/attention.  
 P363: Wash contaminated clothing before reuse.  
 P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
 P403 + P235: Store in a well-ventilated place. Keep cool.  
 P405: Store locked up.  
 P501: Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS:** Rapidly absorbed through skin

Section 3. Composition / Information on Ingredients

**Common Name** N,N-Dimethylacetamide  
**Synonym(s)** DMAc; Dimethylacetamide; DMAA; normal dimethylacetamide  
**Formula** C<sub>4</sub>H<sub>9</sub>NO  
**CAS Number** 127-19-5

| COMPONENT             | CAS NUMBER | CONCENTRATION |
|-----------------------|------------|---------------|
| N,N-Dimethylacetamide | 127-19-5   | ≤ 100%        |

Section 4. First Aid Measures

**Description of first aid measures**

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin contact:** Wash off with soap and plenty of water. Consult a physician.

**Eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in the labelling and/or in section 11.

**Indication of any immediate medical attention and special treatment needed:** No data available

Section 5. Firefighting Measures

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

**Special hazards arising from the substance or mixture:** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

**Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Further information:** Use water spray to cool unopened containers

Section 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

**Reference to other sections:** For disposal see section 13

Section 7. Handling and Storage

**Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. Hygroscopic.

**Storage class (TRGS 510):** Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Section 8. Exposure Controls / Personal Protection

**Control parameters**

**Components with workplace control parameters**



| Component            | CAS No.  | Value   | Control Parameters                           | Basis  |
|----------------------|----------|---|--|--|
| N,NDimethylacetamide | 127-19-5 | TWA   | 10.000000 ppm                                | USA. ACGIH Threshold Limit Values (TLV)  |
|                      | Remarks  | Liver damage Embryo/fetal damage Substances for which there is a Biological Exposure Index or Indices Not classifiable as a human carcinogen Danger of cutaneous absorption |  |  |
|                      |          | TWA   | 10.000000 ppm<br>35.000000 mg/m <sup>3</sup> | USA. NIOSH Recommended Exposure Limits   |
|                      |          | Potential for dermal absorption   |  |  |
|                      |          | TWA   | 10.000000 ppm<br>35.000000 mg/m <sup>3</sup> | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
|                      |          | Skin designation The value in mg/m <sup>3</sup> is approximate.   |  |  |

**Biological occupational exposure limits**

| Component            | CAS No.  | Parameters                      | Value             | Biological specimen | Basis                                     |
|----------------------|----------|---------------------------------|-------------------|---------------------|---|
| N,NDimethylacetamide | 127-19-5 | N-Methylacetamide               | 30mg/g Creatinine | Urine               | ACGIH - Biological Exposure Indices (BEI) |
|                      | Remarks  | End of shift at end of workweek |                   |                     |   |

Derived No Effect Level (DNEL)

| Application Area | Exposure routes | Health effect              | Value                |
|------------------|-----------------|----------------------------|----------------------|
| Workers          | Skin contact    | Long-term systemic effects | 13.6mg/kg BW/d       |
| Workers          | Inhalation      | Long-term systemic effects | 36 mg/m <sup>3</sup> |

**Predicted No Effect Concentration (PNEC)**

- Soil:** 0.15 mg/kg
- Marine water:** 0.0966 mg/l
- Fresh water:** 0.5 mg/l
- Fresh water sediment:** 2.27 mg/kg
- Sewage treatment plant:** 485 mg/l
- Aquatic intermittent release:** 5 mg/l

### Exposure controls

**Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

**Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection:** Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## Section 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

**Appearance:** Clear, colorless liquid

**Odor:** Ammonia odor

**Odor Threshold:** No data available

**pH:** 4 at 200 g/l at 20°C (68°F)

**Melting point/freezing point:** Melting point/range: -20°C (-4°F)

**Initial boiling point and boiling range:** 164.5 - 166°C (328.1 - 331°F)

**Flash point (Closed Cup):** 70°C (158°F)

**Evaporation rate:** No data available

**Flammability (solid, gas):** No data available

### Upper/lower flammability or explosive limits

**Upper explosion limit:** 11.5% (V)

**Lower explosion limit:** 1.8% (V)

**Vapor pressure:** 2 hPa (2 mmHg) at 21.7°C (71.1°F), 11.8 hPa (8.9 mmHg) at 50°C (122°F)

**Vapor density:** 3.01 - (Air = 1.0)

**Relative density:** 0.937 g/mL at 25°C (77°F)

**Water solubility:** 1,000 g/l at 20°C (68°F) - completely miscible

**Partition coefficient (n-Octanol/ water):** log Pow: -0.77

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

#### Other safety information

**Dissociation constant:** -0.18 at 25°C (77°F)

**Relative vapor density:** 3.01 (Air = 1.0)

#### Section 10. Stability and Reactivity

**Reactivity:** No data available

**Chemical stability:** Hygroscopic. Stable under recommended storage conditions.

**Possibility of hazardous reactions:** No data available

**Conditions to avoid:** Heat, flames and sparks.

**Incompatible materials:** Strong oxidizing agents

#### Hazardous decomposition products

**Other decomposition products:** No data available

**In the event of fire:** see section 5

#### Section 11. Toxicological Information

##### Information on toxicological effects

###### Acute toxicity

**LD50 Oral:** Rat - 5,680 mg/kg (OECD Test Guideline 401)

**LC50 Inhalation:** Rat - 1 h - 2475 ppm

**Remarks:** Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

**LD50 Dermal:** Rabbit - 2,240 mg/kg

###### Skin corrosion/irritation

**Skin:** Rabbit

**Result:** No skin irritation

###### Serious eye damage/eye irritation

**Eyes:** Rabbit

**Result:** Irritating to eyes. (Draize Test)

###### Respiratory or skin sensitization

**Guinea pig:** Did not cause sensitization on laboratory animals.

**Germ cell mutagenicity:** No data available

**Carcinogenicity:** This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

**IARC:** No components of this product, present at levels greater than or equal to 0.1%, is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP:** No components of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No components of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** May cause congenital malformation in the fetus. Presumed human reproductive toxicant. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

**Specific target organ toxicity - single exposure:** No data available

**Specific target organ toxicity - repeated exposure:** No data available

**Aspiration hazard:** No data available

#### Additional Information

**RTECS:** AB7700000

Impaired judgment, emotional instability, toxic psychosis, nystagmus, dysarthria, Ataxia.

Liver - Irregularities - Based on Human Evidence

#### Section 12. Ecological Information

##### Toxicity

##### Toxicity to fish

**LC50:** Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h

##### Toxicity to daphnia and other aquatic invertebrates:

**Immobilization EC50:** Daphnia magna (Water flea): > 500 mg/l (48 h)

(OECD Test Guideline 202)

**Toxicity to algae static test EC50:** Desmodesmus subspicatus (green algae): > 500 mg/l (72 h)

##### Persistence and degradability

##### Biodegradability

**Aerobic:** Exposure time 14 d

**Result:** 77 - 83% - Readily biodegradable (OECD Test Guideline 302)

**Bio accumulative potential:** No data available

**Mobility in soil:** No data available

**Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted



**Other adverse effects:** No data available

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**DOT (US)**

**NA-Number:** 1993

**Class:** None

**Packing group:** III

**Proper shipping name:** Combustible liquid, n.o.s. (N,N-Dimethylacetamide)

**Poison Inhalation Hazard:** No

**IMDG:** Not dangerous goods

**IATA:** Not dangerous goods

Section 15. Regulatory Information

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right to Know Components**

N,N-Dimethylacetamide (CAS-No. 127-19-5)

**Pennsylvania Right to Know Components**

N,N-Dimethylacetamide (CAS-No. 127-19-5)

**New Jersey Right to Know Components**

N,N-Dimethylacetamide (CAS-No. 127-19-5)

**California Prop. 65 Components:** Warning: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

N,N-Dimethylacetamide (CAS-No. 127-19-5)

**HMIS Rating**

**Health:** 1\*

**Flammability:** 2

**Reactivity:** 0





**NFPA Rating**

**Health:** 1

**Flammability:** 2

**Reactivity:** 0

Section 16. Other Information

**Disclaimer:** 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.

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