# DIMETHYLACETAMIDE

## PRODUCT IDENTIFICATION

<table>
<thead>
<tr>
<th><strong>CAS NO.</strong></th>
<th>127-19-5</th>
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</thead>
<tbody>
<tr>
<td><strong>EINECS NO.</strong></td>
<td>204-826-4</td>
</tr>
<tr>
<td><strong>FORMULA</strong></td>
<td>CH₃CON(CH₃)₂</td>
</tr>
<tr>
<td><strong>MOL WT.</strong></td>
<td>87.12</td>
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<tr>
<td><strong>H.S. CODE</strong></td>
<td>2924.10</td>
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</tbody>
</table>

## TOXICITY

**Oral rat LD50:** 4300 mg/kg

## SYNONYMS

DMAc; Acetic Acid, Dimethylamide; Dimethyl Acetamide; Acetyldimethylamine; Dimethylamid Kyseliny Octove (Czech); N,N-Dimethylacetamid (German); N,N-Dimetilacetamida (Spanish); dimethylacétamide (French);

## RAW MATERIALS

CLASSIFICATION

## PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL STATE
- Clear, colorless liquid

### MELTING POINT
- -20 °C

### BOILING POINT
- 164 - 166 °C

### SPECIFIC GRAVITY
- 0.94

### SOLUBILITY IN WATER
- Miscible

### pH

### VAPOR DENSITY
- 3.0

### AUTOIGNITION

### NFPA RATINGS
- Health: 2; Flammability: 2; Reactivity: 0

### REFRACTIVE INDEX
- 1.4380

### FLASH POINT
- 66 °C

### STABILITY
- Stable under ordinary conditions

## APPLICATIONS

N,N-Dimethylacetamide (DMAc) is a clear oily liquid miscible in all proportion with water; melting point -20 °C and boiling point 165 °C at 1013 hPa. It is dissolved in most of organic solvents including alcohols, ethers, ketones, chlorinated and aromatic solvents except aliphatic hydrocarbons. DMAc is produced from acetic acid and dimethylamine. It is the acetic acid amide with two methyl group substituents on the nitrogen atom. The is for acid analogue is N,N-dimethylformamide (DMF). DMAc is less toxic than DMF. The good water solubility and excellent solvent power particularly for high molecular weight polymers and resins make DMAc as a common solvent in man-made fibre and polyurethane production. DMAc is also used as a solvent for production of X- and photo-resist stripping compounds. N,N-Dimethylacetamide is a dipolar aprotic solvent with a high boiling point. DMAc is a good reaction medium and catalyst. It facilitates the Sₓ₂ reaction mechanism. It is a reactive solvent or plasticizer for cosmetic and pharmaceutical intermediates. It is also used as an extraction agent for gases and oils.

## SALES SPECIFICATION

### APPEARANCE
- Clear, colorless liquid

### PURITY
- 99.8% min

### COLOR, APHA
- 5 max

### ACIDITY (as HCOOH)
- 100ppm max

### MOISTURE
- 500ppm max

## TRANSPORTATION

### PACKING
- 180kgs in Drum
<table>
<thead>
<tr>
<th>Polarity</th>
<th>Group</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar</td>
<td>Water</td>
<td>H-OH</td>
</tr>
<tr>
<td>jè</td>
<td>Carboxylic Acids</td>
<td>R-COOH</td>
</tr>
<tr>
<td>jè</td>
<td>Amides</td>
<td>R-CO-NH₂</td>
</tr>
<tr>
<td>jè</td>
<td>Alcohols</td>
<td>R-OH</td>
</tr>
<tr>
<td>jè</td>
<td>Amines</td>
<td>R-NH₂</td>
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<tr>
<td>jè</td>
<td>Ketones (Aldehydes)</td>
<td>R-CO-R'</td>
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<tr>
<td>jè</td>
<td>Esters</td>
<td>R-COOR'</td>
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<td>jè</td>
<td>Alkyl Halides</td>
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<tr>
<td>jè</td>
<td>Ethers</td>
<td>R-O-R'</td>
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<tr>
<td>jè</td>
<td>Aromatics</td>
<td>Ar-H</td>
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<tr>
<td>Non-polar</td>
<td>Alkanes</td>
<td>R-H</td>
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