

## Material Safety Data Sheet

Version 4.0

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : N,N-Dimethylacetamide

Product Number : 270555

Brand : Sigma-Aldrich

Company : Sigma-Aldrich Canada, Ltd  
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## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## Target Organs

Liver, Kidney, Central nervous system, Bone marrow, Testes., Thymus.

## WHMIS Classification

B3	Combustible Liquid	Combustible Liquid
D1A		Highly toxic by inhalation
D2A		Teratogen
D2B		Moderate eye irritant

## GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H227	Combustible liquid
H303	May be harmful if swallowed.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H360	May damage fertility or the unborn child.

Precautionary statement(s)

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311	Call a POISON CENTER or doctor/physician.

## HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	2
Physical hazards:	1

## NFPA Rating

**Health hazard:** 2  
**Fire:** 2  
**Reactivity Hazard:** 1

#### Potential Health Effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** Harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C<sub>4</sub>H<sub>9</sub>NO  
Molecular Weight : 87.12 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>N,N-Dimethylacetamide</b>			
127-19-5	204-826-4	616-011-00-4	-

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### 4. FIRST AID MEASURES

#### General advice

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

#### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

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

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

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### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

#### 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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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### 7. HANDLING AND STORAGE

#### Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

#### Conditions for safe storage

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
N,N-Dimethylacetamide	127-19-5	TWA	10 ppm	2006-11-29	Canada. British Columbia OEL
Remarks	Adverse reproductive effect Contributes significantly to the overall exposure by the skin route.				
		TWAE V	10 ppm 36 mg/m3	2005-12-17	Canada. Ontario OELs
	Skin				
		TWA	10 ppm 36 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin				
		TWAE V	10 ppm 36 mg/m3	2006-12-29	Canada. Quebec OELs
	Skin (percutaneous)				

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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).

#### Hand protection

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	liquid, clear
Colour	colourless
Odour	Ammonia odor

### Safety data

pH	4 at 200 g/l at 20 °C (68 °F)
Melting point	-20 °C (-4 °F)
Boiling point	164.5 - 166.0 °C (328.1 - 330.8 °F) at 1,013 hPa (760 mmHg)
Flash point	70 °C (158 °F) - closed cup

Ignition temperature	490 °C (914 °F)
Lower explosion limit	1.8 %(V)
Upper explosion limit	11.5 %(V)
Vapour pressure	3 hPa (2 mmHg) at 25 °C (77 °F) 5 hPa (4 mmHg) at 38 °C (100 °F)
Density	0.937 g/cm <sup>3</sup>
Water solubility	completely miscible
Partition coefficient: n-octanol/water	log Pow: -0.77
Relative vapour density	3.01 - (Air = 1.0)

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## 10. STABILITY AND REACTIVITY

### Chemical stability

hygroscopic Stable under recommended storage conditions.

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD<sub>50</sub> Oral - rat - 4,300 mg/kg

LC<sub>50</sub> Inhalation - rat - 1 h - 2475 ppm

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

LD<sub>50</sub> Dermal - rabbit - 2,240 mg/kg

### Skin corrosion/irritation

### Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation

### Respiratory or skin sensitization

no data available

### 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 component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### 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 (GHS)**

no data available

**Specific target organ toxicity - repeated exposure (GHS)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.

**Signs and Symptoms of Exposure**

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

**Additional Information**

RTECS: AB7700000

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## 12. ECOLOGICAL INFORMATION

**Toxicity**

Toxicity to fish	LC50 - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae) - > 500 mg/l - 72 h

**Persistence and degradability**

Biodegradability	Result: > 90 % - Readily biodegradable.
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**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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## 13. DISPOSAL CONSIDERATIONS

**Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

**DOT (US)**

NA-Number: 1993    Class: CBL    Packing group: III  
Proper shipping name: Combustible liquid, n.o.s. (N,N-Dimethylacetamide)

Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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**15. REGULATORY INFORMATION**

**DSL Status**

All components of this product are on the Canadian DSL list.

**WHMIS Classification**

B3	Combustible Liquid	Combustible Liquid
D1A		Highly toxic by inhalation
D2A		Teratogen
D2B		Moderate eye irritant

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**16. OTHER INFORMATION**

**Further information**

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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. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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