

# SAFETY DATA SHEET

Version 6.4  
Revision Date 16.07.2021  
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## SECTION 1: Identification of the hazardous chemical and of the supplier

### 1.1 Product identifiers

Product name : *N,N*-Dimethylacetamide

Product Number : 185884  
Brand : Aldrich  
CAS-No. : 127-19-5

### 1.2 Other means of identification

No data available

### 1.3 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

### 1.4 Details of the supplier of the safety data sheet

Company : SIGMA-ALDRICH (M) SDN BHD  
Level 3, Menara Sunway Annexe,  
Jalan Lagoon Timur, Bandar Sunway,  
46150 PETALING JAYA, SELANGOR  
MALAYSIA

Telephone : +60 (603)03-563-53321  
Fax : +60 (603)03-563-54116

### 1.5 Emergency telephone

Emergency Phone # : 1-800-815-308 (CHEMTREC) \* + 62 0800  
140 1253 (Customer Call Centre)

## Section 2: Hazard identification

### 2.1 GHS Classification

Classification according to CLASS regulations 2013

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Reproductive toxicity (Category 1B), H360D

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Labelling according to CLASS regulations 2013

Pictogram



Signal word : Danger

Hazard statement(s)  
H312 + H332 : Harmful in contact with skin or if inhaled.

H360D May damage the unborn child.

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P280 Wear protective gloves/ protective clothing.  
P281 Use personal protective equipment as required.

Response

P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Restricted to professional users.

**Reduced Labeling (<= 125 ml)**

Pictogram



Signal word Danger

Hazard statement(s) none

Precautionary statement(s) none

Refer to the Safety Data Sheet before use.

**2.3 Other hazards**

Rapidly absorbed through skin.

**SECTION 3: Composition and information of the ingredients of the hazardous chemical**

Substance / Mixture : Substance

**3.1 Substances**

Formula : C<sub>4</sub>H<sub>9</sub>NO  
Molecular weight : 87.12 g/mol  
CAS-No. : 127-19-5  
EC-No. : 204-826-4  
Index-No. : 616-011-00-4

**Hazardous ingredients**

Component	Classification	Concentration
<b>N,N-Dimethylacetamide</b>	Acute Tox. 4; Repr. 1B; H332, H312, H360D	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**

**4.1 Description of first-aid measures**

**General advice**

Show this material safety data sheet to the doctor in attendance.

**If inhaled**

After inhalation: fresh air. Call in physician.

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

**If swallowed**

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>) Foam Dry powder

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

**5.3 Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**5.4 Further information**

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store under inert gas. Hygroscopic.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls and personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
N,N-Dimethylacetamide	127-19-5	TWA	10 ppm 36 mg/m <sup>3</sup>	Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.
	Remarks	Skin		

#### Derived No Effect Level (DNEL)

Application Area	Routes of exposure	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)**

Compartment	Value
Soil	0.15 mg/kg
Sea 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

**8.2 Exposure controls****Appropriate engineering controls**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

**Personal protective equipment****Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

**Body Protection**

protective clothing

**Respiratory protection**

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid, clear Color: colorless
b) Odor	Ammonia odor
c) Odor Threshold	44.4 ppm
d) pH	ca.4 at 200 g/l at 20 °C
e) Melting point/freezing point	Melting point/range: -20 °C - lit.
f) Initial boiling point and boiling range	164.5 - 166 °C - lit.
g) Flash point	64 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 11.5 %(V) Lower explosion limit: 1.8 %(V)
k) Vapor pressure	2 hPa at 21.7 °C
l) Vapor density	3.01 - (Air = 1.0)
m) Density	0.937 g/mL at 25 °C - lit.
Relative density	No data available
n) Water solubility	1,000 g/l at 20 °C - completely miscible
o) Partition coefficient: n-octanol/water	log Pow: -0.77 - Bioaccumulation is not expected., (Lit.)
p) Autoignition temperature	345 °C at 999 - 1,011 hPa - DIN 51794
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0.92 mPa.s at 25 °C
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### 9.2 Other safety information

Dissociation constant -0.19 at 25 °C

Relative vapor density 3.01 - (Air = 1.0)

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Forms explosive mixtures with air on intense heating.

Aldrich- 185884

Page 6 of 11

The life science business of Merck operates as MilliporeSigma in the US and Canada

**MERCK**

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

#### **10.2 Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .  
hygroscopic

#### **10.3 Possibility of hazardous reactions**

No data available

#### **10.4 Conditions to avoid**

Strong heating.

#### **10.5 Incompatible materials**

various plastics

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Acute toxicity**

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

LC50 Inhalation - Rat - female - 1 h - 8.8 mg/l  
(OECD Test Guideline 403)

Remarks: (ECHA)

Acute toxicity estimate Dermal - 1,100.1 mg/kg  
(Expert judgment)

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation  
(OECD Test Guideline 404)

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

Eyes - Rabbit

Result: Irritating to eyes.  
(OECD Test Guideline 405)

##### **Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Guinea pig

Result: negative  
(OECD Test Guideline 429)

##### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

May damage the unborn child.

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 2 yr - NOAEL (No observed adverse effect level) - 100 - 300 mg/kg - LOAEL (Lowest observed adverse effect level) - 300 - 1,000 mg/kg

RTECS: AB7700000

impaired judgment, emotional instability, toxic psychosis, nystagmus, dysarthria, Ataxia.  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption of toxic quantities:

Nausea  
Vomiting  
inebriation  
muscle twitching  
hallucinations  
Diarrhea  
lack of appetite  
narcosis  
Coma

Damage to:

Liver  
Kidney  
Central nervous system

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Liver - Irregularities - Based on Human Evidence



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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h (DIN 38412 T15)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h (Regulation (EC) No. 440/2008, Annex, C.2)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 500 mg/l - 72 h (DIN 38412)
Toxicity to bacteria	static test EC10 - activated sludge - > 1,995 mg/l - 30 min (OECD Test Guideline 209)

### 12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 70 % - Readily biodegradable. (OECD Test Guideline 301C) Remarks: The 10 day time window criterion is not fulfilled.
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### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

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## SECTION 13: Disposal information

### 13.1 Waste treatment methods

#### Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions. According to Quality Environment Regulation (Scheduled Waste) 2005, waste need to be sent to designated premise for recycle, treatment or disposal. Please contact Kualiti Alam for waste classification and correct disposal method.

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## SECTION 14: Transportation information

### 14.1 UN number

ADR/RID: -	IMDG: -	IATA-DGR: -
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### 14.2 UN proper shipping name

ADR/RID:	Not dangerous goods
IMDG:	Not dangerous goods

IATA-DGR: Not dangerous goods

#### 14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA-DGR: -

#### 14.4 Packaging group

ADR/RID: - IMDG: - IATA-DGR: -

#### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

#### 14.6 Special precautions for user

None

#### 14.7 Incompatible materials

various plastics

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### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

##### Notification status

**AICS:** On the inventory, or in compliance with the inventory  
**DSL:** All components of this product are on the Canadian DSL  
**ENCS:** On the inventory, or in compliance with the inventory  
**ISHL:** On the inventory, or in compliance with the inventory  
**KECI:** On the inventory, or in compliance with the inventory  
**NZIoC:** On the inventory, or in compliance with the inventory  
**PICCS:** On the inventory, or in compliance with the inventory

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### SECTION 16: Other information

#### Full text of H-Statements referred to under sections 2 and 3.

H312 Harmful in contact with skin.  
H332 Harmful if inhaled.  
H360D May damage the unborn child.

#### Further information

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 Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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