Safety Data Sheet

According to the UN GHS revision 8

Creation Date: April 23, 2026
Revision Date: April 23, 2026

1. IDENTIFICATION

1.1 GHS Product identifier

Product name: N,N-Dimethylacetamide

Catalog Number: T19439

CAS Number: 127-19-5

1.2 Other means of identification

Other names: -

1.3 Recommended use of the chemical and restrictions on use

Identified uses: no data available

1.4 Supplier's details

Company: Targetmol Chemicals Inc.

Address: 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA

Tel/Fax: (781) 999-4286

1.5 Emergency phone number

Emergency phone number: 781-999-4286

Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Dermal
Acute toxicity - Category 4, Inhalation
Reproductive toxicity, Category 1B

2.2 GHS label elements, including precautionary statements

Pictogram(s):

Signal word: Danger

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

Precautionary statement(s):

Prevention:
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P203 Obtain, read and follow all safety instructions before use.

Response:
P302+P352 IF ON SKIN: Wash with plenty of water/...
P317 Get medical help.
P321 Specific treatment (see ... on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P318 IF exposed or concerned, get medical advice.

Storage: P405 Store locked up.

Disposal: P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards which do not result in classification

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number
N,N-Dimethylacetamide	-	127-19-5	204-826-4

4. FIRST-AID MEASURES

4.1 Description of necessary first-aid measures

General advice

no data available

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Give one or two glasses of water to drink. Do NOT induce vomiting. Seek medical attention if you feel unwell.

4.2 Most important symptoms/effects, acute and delayed

Skin exposures should be followed by prompt water flushing. Eye exposure should be followed by immediate saline irrigation & an ophthalmology review. Oral ingestions of DMAC should be treated symptomatically & supportively in a hospital. Liver function tests should be obtained periodically as indicated.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Liquid causes mild irritation of eyes and skin. Ingestion causes depression, lethargy, confusion and disorientation, visual and auditory hallucinations, perceptual distortions, delusions, emotional detachment, and affective blunting. (USCG, 1999)

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Extinguish with water, dry chemicals, alcohol foam or carbon dioxide

5.2 Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)

5.3 Special protective actions for fire-fighters

Use powder, alcohol-resistant foam, water spray, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: chemical protection suit. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.2 Environmental precautions

Personal protection: chemical protection suit. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.3 Methods and materials for containment and cleaning up

1. Ventilate the area of spill or leak. 2. For small quantities, absorb on paper towels. Evaporate in safe place (such as fume hood). Allow sufficient time for evaporating vapors to completely clear the hood ductwork. Burn paper in suitable location away from combustible materials.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

NO open flames. Above 63°C use a closed system, ventilation and explosion-proof electrical equipment. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Ventilation along the floor. Separated from strong oxidants.MATERIALS WHICH ARE TOXIC AS STORED OR WHICH CAN DECOMPOSE INTO TOXIC COMPONENTS ... SHOULD BE STORED IN A COOL WELL VENTILATED PLACE, OUT OF DIRECT RAYS OF THE SUN, AWAY FROM AREAS OF HIGH FIRE HAZARD, AND SHOULD BE PERIODICALLY INSPECTED. INCOMPATIBLE MATERIALS SHOULD BE ISOLATED .

Powder: -20°C for 3 years

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

TLV: 10 ppm as TWA; (skin); A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.MAK: 18 mg/m3, 5 ppm; peak limitation category: II(2); skin absorption (H); pregnancy risk group: C.EU-OEL: 36 mg/m3, 10 ppm as TWA; 72 mg/m3, 20 ppm as STEL; (skin)

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear face shield.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use ventilation, local exhaust or breathing protection.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Color	Transparent
Odour	AMINE
Melting point/freezing point	-20 °C.
Boiling point or initial boiling point and boiling range	166 °C. Atm. press.:1 013.25 hPa.
Flammability	Class IIIA Combustible Liquid: Fl.P. at or above 140°F and below 200°F.
Lower and upper explosion limit/flammability limit	LOWER FLAMMABLE LIMIT: 1.8% BY VOL @ 212 DEG F; UPPER FLAMMABLE LIMIT: 11.5% BY VOL @ 320 DEG F

Flash point	64 °C. Atm. press.:1 013.25 hPa.
Auto-ignition temperature	345 °C. Atm. press.:999 - 1 011 hPa.
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	dynamic viscosity (in mPa s) = 0.92. Temperature:25.0°C.
Solubility	DMSO: 80 mg/mL (918.27 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
N-octanol-water partition coefficient	log Pow = -0.77. Temperature:25 °C.
Vapour pressure	2 hPa. Temperature:21.7 °C.
Density and/or relative density	0.94 g/cm3. Temperature:20 °C.
Relative vapour density	3.89 (vs air)
Particle characteristics	no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Decomposes on heating. This produces toxic fumes. Reacts with strong oxidants strong oxidants.

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

Combustible when exposed to heat or flame.DIMETHYLACETAMIDE is an amide. Incompatible with oxidizing agents and halogenated compounds. Exothermic reactions occur with carbon tetrachloride and hexachlorocyclohexane. It can react violently in the presence of iron. (NTP, 1992) Special Hazards of Combustion Products: Emits carbon oxides, nitrogen oxides, and dimethylamine when heated to decomposition.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Carbon tetrachloride, other halogenated compounds when in contact with iron, oxidizers.

10.6 Hazardous decomposition products

On decomposition can emit fumes highly irritating to eyes, mucous membranes.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 - rat (male/female) - ca. 5 830 mg/kg bw. Remarks:Males and females combined.
Inhalation: LC50 - rat (female) - 8.8 mg/L air.
Dermal: approximate lethal dose - rabbit (female) - 5 000 mg/kg bw.

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

A4: Not classifiable as a human carcinogen.

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

The substance may have effects on the liver. This may result in impaired functions. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

Aspiration hazard

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: LC50 - Leuciscus idus - > 500 mg/L - 96 h.
Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - > 500 mg/L - 48 h.
Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 500 mg/L - 72 h.
Toxicity to microorganisms: LOEC - Pseudomonas putida - 4 850 mg/L - 16 h.

12.2 Persistence and degradability

AEROBIC: N,N-Dimethylacetamide, present at 100 mg/l reached 28% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/l and the Japanese MITI test(1). N,N-Dimethylacetamide, present at 30 mg/l, reached 80% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 100 mg/l and the Japanese MITI test(1). In other studies, N,N-dimethylacetamide, present at 400 mg/l, reached 96% of its theoretical TOC in 5 days using industrial activated sludge(2). These results from laboratory studies suggest that N,N-dimethylacetamide will biodegrade in the environment(SRC).

12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated for N,N-dimethylacetamide(SRC), using a log Kow of -0.77(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

12.4 Mobility in soil

The Koc of N,N-dimethylacetamide is estimated as 9(SRC), using a measured log Kow of -0.77(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that N,N-dimethylacetamide is expected to have very high mobility in soil(SRC).

12.5 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1 UN Number

no data available

14.2 UN Proper Shipping Name

no data available

14.3 Transport hazard class(es)

no data available

14.4 Packing group, if applicable

no data available

14.5 Environmental hazards

no data available

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.
Korea Existing Chemicals List (KECL)	Listed.

16. OTHER INFORMATION

Information on revision

Creation Date April 23, 2026

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/
eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
ECHA - European Chemicals Agency, website: https://echa.europa.eu/

Other Information

Depending on the degree of exposure, periodic medical examination is suggested.There is no odour warning even when toxic concentrations are present.
