Material Safety Data Sheet

DYMETHYLACETAMIDE

Version: 2.0 EN

Revision Date: 2025-03

SECTION 1: IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Product identifiers

Product Name	DYMETHYLACETAMIDE
CAS No	127-19-5
Synonyms	Dimethyl Acetamide, DMAC

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company	China lithium Products technology Company Limited
	9H, No.99, Lujiang Road, Xiamen, China
Telephone	+86 592 2687860
Email	info@lithium-chemical.com

1.4 Emergency telephone number

Emergency phone #	+86 592 2687860

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Acute toxicity, (Category 4) H332: Harmful if inhaled.

Acute toxicity, (Category 4) H312: Harmful in contact with skin.

Eye irritation, (Category 2) H319: Causes serious eye irritation.

Reproductive toxicity, (Category 1B) H360D: May damage the unborn child.

2.2 GHS Label elements, including precautionary statements

Pictogram 

Signal word Danger

Hazard statement(s)

H312 + H332	Harmful in contact with skin or if inhaled
H319	Causes serious eye irritation.
H360D	May damage the unborn child.

Precautionary statement(s)

P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
P302 + P352 + P312	IF ON SKIN: Wash with plenty of water.Call a POISON CENTER/ doctor if you feel unwell.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a

	POISON CENTER/ doctor 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.
Supplemental Hazard Statements	none

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance name	DYMETHYLACETAMIDE
Formula	C4H9NO
CAS No	127-19-5
EC No	204-826-4

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. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

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

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2) 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 (NOx)

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 www.lithium-chemical.com

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.

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

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

Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

7.3 Specific end use(s)

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

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/m3

8.2 Exposure controls

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

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory protection

Recommended Filter type: Filter A-(P3) The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	liquid, clear
Color	colorless
Odor	Ammonia odor
Melting point/freezing point	Melting point/ range: -20 °C
Initial boiling point and boiling range	164,5 - 166 °C
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Upper explosion limit: 11,5 %(V)

	Lower explosion limit: 1,8 %(V)
Flash point	64 °C - closed cup
Autoignition temperature	345 °C at 999 - 1.011 hPa - DIN 51794
Decomposition temperature	No data available
pH	ca.4 at 200 g/l at 20 °C
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0,92 mPa.s at 25 °C
Water solubility	1.000 g/l at 20 °C - completely miscible
Partition coefficient: n-octanol/water	log Pow: -0,77 - Bioaccumulation is not expected., (Lit.)
Vapor pressure	2 hPa at 21,7 °C
Density	0,937 g/mL at 25 °C
Relative density	No data available
Relative vapor density	No data available
Particle characteristics	No data available
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other safety information

Dissociation constant	-0,19 at 25 °C
Relative vapor density	3,01 - (Air = 1.0)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Forms explosive mixtures with air on intense heating. 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

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Harmful in contact with skin. Harmful if inhaled.May be harmful if swallowed.

Skin corrosion/irritation

No skin irritation

Serious eye damage/eye irritation

Irritating to eyes. (Draize Test)

Respiratory or skin sensitization

Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

No data available

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

Additional Information

RTECS: AB7700000 Impaired judgment, emotional instability, toxic psychosis, nystagmus, dysarthria, Ataxia. Liver - Irregularities - Based on Human Evidence

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment

12.2 Persistence and degradability

Persistence is unlikely

12.3 Bioaccumulative potential

No information available

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No data available

SECTION 14: TRANSPORT INFORMATION

DOT (US)

ADR/RID:	UN proper shipping name: No	Passenger Aircraft: No
Packaging group:No	Transport hazard class(es): No	Environmental hazards: No

IMDG

IMDG:	UN proper shipping name:No	Passenger Aircraft: No
Packaging group:No	Transport hazard class(es):No	Environmental hazards: No

IATA

IATA:	UN proper shipping name: No	Passenger Aircraft: No
Packaging group:No	Transport hazard class(es):No	Environmental hazards: No

SECTION 15: REGULATORY INFORMATION

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: OTHER INFORMATION

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product.