

# SAFETY DATA SHEET

## ***N,N-Dimethylacetamide***

This SDS adheres to the standards and regulatory requirements of China and may not meet the regulatory requirements in other countries.

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product name** : N,N-Dimethylacetamide

**Other names** : DMAC

**Recommended use of the chemical and restriction on use**

Recommended use : Solvent, For industrial use only.

**Manufacturer, importer, supplier**

Company : Young Sun Chemtrade Co.,Ltd.

Street address : 14F., No.125, Sec. 2, Nanjing E. Rd., Zhongshan Dist.,  
Taipei City 104, Taiwan

Telephone : +886 2516 7189

Telefax : +886 25167187

**Emergency telephone number** : +886 2516 7189 (in case of chemical spill, fire or poisoning accident)

### 2. HAZARDS IDENTIFICATION

**Product hazard classification**

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 5

Acute toxicity : Category 4

(Inhalation)

Acute toxicity (Dermal) : Category 5

Serious eye : Category 2A

damage/eye irritation

Reproductive toxicity : Category 1B

Endpoints which are not classified, cannot be classified or are not applicable are not shown.

**Label content**

Pictogram



**Signal word** : Danger

**Hazardous warnings** : Combustible liquid.  
May be harmful if swallowed or in contact with skin.  
Causes serious eye irritation.  
Harmful if inhaled.  
May damage fertility or the unborn child.

**Precautionary statements** : Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.

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Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Call a POISON CENTER or doctor/ physician if you feel unwell.  
If eye irritation persists: Get medical advice/ attention.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/ container to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature** : Substance

#### Components

| Chemical Name                                 | CAS-No.  | Concentration |
|-----------------------------------------------|----------|---------------|
| N,N-Dimethylacetamide (N,N-Dimethylacetamide) | 127-19-5 | 100 %         |

### 4. FIRST AID MEASURES

Remove from exposure, lie down. Never give anything by mouth to an unconscious person.

#### First aid measures for different exposure routes

- Inhalation** : Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician after significant exposure.
- Skin contact** : Wash off immediately with plenty of water. Take off all contaminated clothing immediately. Wash contaminated clothing before re-use. Consult a physician.
- Eye contact** : Immediately flush eye(s) with plenty of water. Consult a physician.
- Ingestion** : Rinse mouth. Immediately give large quantities of water to drink. Do NOT induce vomiting. Consult a physician if necessary.
- Main symptoms and hazards** : Eye contact may provoke the following symptoms:, Pain, tearing, swelling, redness, or temporary visual impairment.  
Skin contact may provoke the following symptoms:, Discomfort, itching, redness, or swelling.
- Protection of first-aiders** : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician** : Treat symptomatically.

### 5. FIREFIGHTING MEASURES

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|                                                      |                                                                                                                                                                                                                                                                |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>                  | : Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO <sub>2</sub> )<br>Keep containers and surroundings cool with water spray.                                                                                                                           |
| <b>Specific hazards</b>                              | : Hazardous decomposition products formed under fire conditions. Hazardous combustion products: Carbon oxides Nitrogen oxides (NO <sub>x</sub> )                                                                                                               |
| <b>Special protective equipment for firefighters</b> | : Wear self-contained breathing apparatus and protective suit. Decontaminate all equipment used in fire fighting efforts before returning to service.                                                                                                          |
| <b>Specific extinguishing methods</b>                | : No information available.                                                                                                                                                                                                                                    |
| <b>Further information</b>                           | : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool containers/tanks with water spray. |

### 6. ACCIDENTAL RELEASE MEASURES

|                                                                            |                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions, protective equipment and emergency procedures</b> | : Ensure adequate ventilation. Wear personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas.                                                                                                  |
| <b>Environmental precautions</b>                                           | : Prevent product from entering drains. Do not contaminate surface water.                                                                                                                                                             |
| <b>Methods and materials for containment and cleaning up</b>               | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Transfer to suitable containers with a lid. Use mechanical handling equipment. After cleaning, flush away traces with water. |
| <b>Additional advice</b>                                                   | : Dispose of in accordance with local regulations.                                                                                                                                                                                    |

### 7. HANDLING AND STORAGE

#### Handling

|                                |                                                                                                                                                                                                                                                                    |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures/Precautions | : Use only with adequate ventilation. Do not use sparking tools. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Avoid formation of aerosol. |
| Precautions for safe handling  | : Keep away from heat and sources of ignition.<br>Take measures to prevent the build up of electrostatic charge.                                                                                                                                                   |

#### Storage

|                             |                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable storage conditions | : 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.<br><br>Advice on common storage: Keep away from: Polyhalogenated compounds<br>Inorganic acid chlorides Oxidizing agents<br><br>Storage period: Storage temperature: < 54.4 °C |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

| Chemical Name         | Occupational Exposure Limits  | Regulation       |
|-----------------------|-------------------------------|------------------|
| N,N-Dimethylacetamide |                               |                  |
|                       | Can be absorbed through skin. | TW OEL (12 2003) |
| TWA                   | 10 ppm 36 mg/m <sup>3</sup>   | TW OEL (12 2003) |
| TWA                   | 10 ppm                        | US ACGIH (2011)  |
|                       | Can be absorbed through skin. | US ACGIH (2011)  |

**Engineering measures** : Ensure adequate ventilation. Maintain walking and working surfaces free of liquid product. Local exhaust system is recommended for high temperature processing and open resin handling system.

**Biological occupational exposure limits** : No information available.

### Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection : Solvent-resistant gloves (butyl-rubber), Neoprene gloves  
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection : Tightly fitting safety goggles

Skin protection : Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots.

**Hygiene measures** : General industrial hygiene practice. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use. Discard contaminated shoes.

**Protective measures** : Avoid exposure - obtain special instructions before use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance (Physical state, form, colour, etc.)

Physical state : liquid  
Form : liquid  
Colour : clear, colourless

**Odour** : ammoniacal

**Odour Threshold** : No information available.

**pH** : 4.7 (200 g/l) (20 °C)

### Melting point/freezing point

Freezing point : -20 °C

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### Initial boiling point and boiling range

Boiling point/boiling range : 166 °C (1,013 hPa)

Flash point : 63 °C  
closed cup

Evaporation rate : <1

Flammability (solid, gas) : No information available.

### Upper/lower flammability or explosive limits

Upper explosion limit : 11.5 vol% (160 °C)

Lower explosion limit : 1.8 vol% (100 °C)

Vapour pressure : 2 hPa (21.7 °C)  
5.33 hPa (38 °C)

Vapour density : 3.0 (25 °C)

### Density

Specific gravity : 0.945 (16 °C)  
(Relative density)

### Solubility(ies)

Water solubility : completely soluble

Partition coefficient: n-octanol/water : log Pow: -0.77 (25 °C)

### Auto-ignition temperature

Ignition temperature : 335 °C  
Actual Auto ignition Temperature (AIT) can be affected by the concentration of vapours and oxygen, vapour/air contact time, pressure, volume, catalytic impurities, etc. Process conditions should be analyzed to determine if the AIT's may be higher or lower.

Decomposition temperature : > 350 °C

### Viscosity

Viscosity, kinematic : No information available.

Viscosity, dynamic : 0.92 mPa.s (20 °C)

Molecular weight : No information available.

## 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No information available.

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- Conditions to avoid** : To avoid thermal decomposition, do not overheat.
- Materials to avoid** : Polyhalogenated compounds, Inorganic acid chlorides, Oxidizing agents  
Iron
- Hazardous decomposition products** : Acetic acid, Nitrogen oxides (NO<sub>x</sub>) Methylamine (di-)

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Oral

- N,N-Dimethylacetamide : LD50/Mouse: 4,610 mg/kg  
Method: OECD Test Guideline 401

##### Inhalation

- N,N-Dimethylacetamide : Acute toxicity estimate/4 h(vapour): 11 mg/l  
Method: Expert judgement

##### Dermal

- N,N-Dimethylacetamide : LD50/Rabbit: 2,100 mg/kg  
Method: OECD Test Guideline 402

#### Skin corrosion/irritation

- N,N-Dimethylacetamide : Species: Rabbit  
Result: No skin irritation  
Classification: Not classified as irritant  
Method: OECD Test Guideline 404

#### Serious eye damage/eye irritation

- N,N-Dimethylacetamide : Species: Rabbit  
Result: Eye irritation  
Classification: Irritating to eyes.  
Method: OECD Test Guideline 405

#### Respiratory or skin sensitisation

- N,N-Dimethylacetamide : Species: Guinea pig  
Result: Does not cause skin sensitisation.  
Classification: Does not cause skin sensitisation.

#### Germ cell mutagenicity

- N,N-Dimethylacetamide : Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

#### Carcinogenicity

- N,N-Dimethylacetamide : Not classifiable as a human carcinogen.  
Animal testing did not show any carcinogenic effects.

#### Reproductive toxicity

- N,N-Dimethylacetamide : Reproductive toxicity: Presumed human reproductive toxicant  
Reduced offspring survival  
Effects on growth of offspring  
Teratogenicity: Animal testing showed effects on embryo-foetal development including:  
Reduced growth

#### Specific Target Organ Toxicity

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### Specific target organ toxicity - single exposure

N,N-Dimethylacetamide : The substance or mixture is not classified as specific target organ toxicant, single exposure.

### Specific target organ toxicity - repeated exposure

N,N-Dimethylacetamide : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Aspiration hazard

No information available.

### Other

N,N-Dimethylacetamide : Use of alcoholic beverages may enhance toxic effects.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

#### Acute and prolonged toxicity to fish

N,N-Dimethylacetamide : LC50/96 h/Leuciscus idus (Golden orfe): > 500 mg/l

#### Toxicity to aquatic plants

N,N-Dimethylacetamide : ErC50/72 h/Desmodesmus subspicatus (green algae): > 500 mg/l  
NOEC/72 h/Desmodesmus subspicatus (green algae): 500 mg/l

#### Acute toxicity to aquatic invertebrates

N,N-Dimethylacetamide : EC50/48 h/Daphnia magna (Water flea): > 500 mg/l

### Persistence and degradability

N,N-Dimethylacetamide : Result: Biodegradable

### Bioaccumulation

No information available.

### Mobility in soil

No information available.

### Other adverse effects

No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods** : Dispose of as special waste in compliance with local and national regulations. Do not dispose of waste into sewer. Can be incinerated, when in compliance with local regulations.

**Contaminated packaging** : If recycling is not practicable, dispose of in compliance with local regulations.

## 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

Not regulated in transport by IMDG/ICAO/IATA

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#### **15. REGULATORY INFORMATION**

Occupational Health & Safety Installation Regulation  
Regulation of Labeling and Hazard Communication of Dangerous and Harmful Chemicals  
Standards on Workplace Atmosphere of Dangerous and Hazardous Materials  
Rules on Road Traffic Safety  
Criteria Governing Methods of and Facilities for Storage, Clearance and Disposal of Industrial Wastes  
Public Hazardous Materials and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations



## 16. OTHER INFORMATION

### References

SDS Number: 130000000030

### Responsible/issuing person

Responsible : Regulatory Affairs  
Department

### Revision Date/Version

Date of first preparation : 2006/03/03  
Revision Date : 2026/03/12

Significant change from previous version is denoted with a double bar.

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