

## Chemical Safety Data Sheet MSDS / SDS

**D(-)-AMETHOPTERIN**

Revision Date:2026-03-21 Revision Number:1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : D(-)-AMETHOPTERIN  
CBnumber : CB9739301  
CAS : 51865-79-3  
EINECS Number : 257-482-2  
Synonyms : d-methotrexate

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P270 Do not eat, drink or smoke when using this product.

P264 Wash skin thoroughly after handling.

P202 Do not handle until all safety precautions have been read and understood.

**Hazard statements**

H341 Suspected of causing genetic defects

H319 Causes serious eye irritation

H315 Causes skin irritation

H301 Toxic if swallowed

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## SECTION 3: Composition/information on ingredients

### Substance

|              |                     |
|--------------|---------------------|
| Product name | : D(-)-AMETHOPTERIN |
| Synonyms     | : d-methotrexate    |
| CAS          | : 51865-79-3        |
| EC number    | : 257-482-2         |
| MF           | : C20H22N8O5        |
| MW           | : 454.44            |

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## SECTION 4: First aid measures

### First Aid Measures

#### General advice

Consult a physician if necessary. Remove to fresh air.

#### Eye contact

Wash with plenty of water.

#### Skin Contact

Wash skin with soap and water.

#### Inhalation

Remove to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration

#### Ingestion

Never give anything by mouth to an unconscious person. Clean mouth with water.

### Most important symptoms and effects, both acute and delayed

#### Symptoms

No information available.

### Indication of any immediate medical attention and special treatment needed

#### Note to physicians

Treat symptomatically.

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## SECTION 5: Firefighting measures

### Suitable Extinguishing Media

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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable Extinguishing Media

None.

### **Specific hazards arising from the chemical**

#### **Specific hazards arising from the chemical**

No information available.

#### **Hazardous combustion products**

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

### **Explosion data**

#### **Sensitivity to Mechanical Impact**

No information available.

#### **Sensitivity to Static Discharge**

No information available.

### **Protective equipment and precautions for firefighters**

#### **Protective equipment and precautions for firefighters**

As in any fire, wear self contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

#### **Personal precautions**

Ensure adequate ventilation, especially in confined areas.

#### **Environmental precautions**

#### **Environmental precautions**

See Section 12 for additional Ecological Information.

### **Methods and material for containment and cleaning up**

#### **Methods for containment**

Prevent further leakage or spillage if safe to do so.

#### **Methods for cleaning up**

Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

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## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

#### **Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice.

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

#### **Storage Conditions**

Protect from moisture. Store at -20 °C.

#### Incompatible materials

None known based on information supplied.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Appropriate engineering controls

##### Engineering Controls

Showers

Eyewash stations

Ventilation systems

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear safety glasses with side shields (or goggles).

##### Skin and Body Protection

Wear protective gloves and protective clothing.

##### Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

##### General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

|                              |                           |
|------------------------------|---------------------------|
| Physical State               | Solid                     |
| Appearance                   | No information available  |
| Odor                         | No information available  |
| pH                           | No information available  |
| Melting point/freezing point | 173 °C                    |
| Boiling point                | 561.26°C (rough estimate) |
| Flash point                  | No information available  |
| Density                      | 1.4080 (rough estimate)   |
| Evaporation rate             | No information available  |
| Upper flammability limits    | No information available  |

|                              |                                                                                  |
|------------------------------|----------------------------------------------------------------------------------|
| Lower flammability limit     | No information available                                                         |
| Vapor pressure               | No information available                                                         |
| Vapor density                | No information available                                                         |
| Specific gravity             | No information available                                                         |
| Water solubility             | No information available                                                         |
| Solubility in other solvents | No information available                                                         |
| Partition coefficient        | No information available                                                         |
| Autoignition temperature     | No information available                                                         |
| Decomposition temperature    | 173 ° C                                                                          |
| Kinematic viscosity          | No information available                                                         |
| Explosive properties         | No information available                                                         |
| Oxidizing properties         | No information available                                                         |
| Solubility                   | Aqueous Base (Slightly, Heated, Sonicated), DMSO (Slightly), Methanol (Slightly) |
| Colour                       | Dark Yellow to Very Dark Yellow                                                  |

## SECTION 10: Stability and reactivity

### Reactivity

Not applicable

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Hazardous polymerization

No information available.

### Conditions to avoid

Exposure to air or moisture over prolonged periods.

### Incompatible materials

Strong oxidizing agents.

### Hazardous Decomposition Products

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

## SECTION 11: Toxicological information

### Information on likely routes of exposure

#### Inhalation

Classified based on available data. For more details, see section 2.

#### **Eye contact**

Classified based on available data. For more details, see section 2.

#### **Skin Contact**

Classified based on available data. For more details, see section 2.

#### **Ingestion**

Classified based on available data. For more details, see section 2.

### **Information on toxicological effects**

#### **Symptoms**

Classified based on available data. For more details, see section 2.

### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

#### **Chronic Toxicity**

Classified based on available data. For more details, see section 2.

### **Numerical measures of toxicity - Product Information**

#### **Unknown acute toxicity**

Classified based on available data. For more details, see section 2

The following values are calculated based on chapter 3.1 of the GHS document

#### **ATEmix (oral)**

100 mg/kg

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## **SECTION 12: Ecological information**

### **Ecotoxicity**

May cause long lasting harmful effects to aquatic life

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

### **Persistence and degradability**

No information available.

### **Bioaccumulation**

No information available.

### **Mobility**

No information available.

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## **SECTION 13: Disposal considerations**

### **Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Contaminated packaging

Do not reuse container.

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## SECTION 14: Transport information

### DOT

**UN/ID no**

UN1544

**Hazard Class**

6.1

**Packing Group**

III

**Proper shipping name**

Alkaloids, solid, n.o.s. (poisonous)

**Description**

UN1544, Alkaloids, solid, n.o.s. (poisonous), 6.1, III

**Emergency Response Guide Number**

151

### IMDG

**UN/ID no**

UN1544

**Hazard Class**

6.1

**Packing Group**

III

**Proper shipping name**

Alkaloids, solid, n.o.s. (poisonous)

**Description**

UN1544, Alkaloids, solid, n.o.s. (poisonous), 6.1, III

**Special Provisions**

43, 223, 274

**EmS-No**

F-A, S-A

### IATA

**UN/ID no**

UN1544

**Hazard Class**

6.1

**Packing Group**

III

**Proper shipping name**

Alkaloid salts, solid, n.o.s.

#### Description

UN1544, Alkaloid salts, solid, n.o.s., 6.1, III

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## SECTION 15: Regulatory information

### International Inventories

All of the components in the product are on the following Inventory lists

Europe (EINECS/ELINCS/NLP)

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

| Chemical name    | TSCA | DSL | NDL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|------------------|------|-----|-----|--------|--------|------|-------|------|-------|------|
| (R)-Methotrexate | -    | -   | -   | X      | -      | -    | -     | -    | -     | -    |

### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### SARA 311/312 Hazard Categories

##### Acute health hazard

No

##### Chronic Health Hazard

No

##### Fire hazard

No

##### Sudden release of pressure hazard

No

##### Reactive hazard

No

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### US State Regulations

## California Proposition 65

This product does not contain any Proposition 65 chemicals.

## U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.