

## Chemical Safety Data Sheet MSDS / SDS

## DEMETON O

Revision Date:2026-05-31 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : DEMETON O  
CBnumber : CB2500665  
CAS : 298-03-3  
EINECS Number : 206-053-8  
Synonyms : Phosphorothioic acid, O,O-diethyl O-[2-(ethylthio)ethyl] ester, Demetonthione

## 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

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P321 Specific treatment (see ... on this label).  
P330 Rinse mouth.  
P405 Store locked up.  
P501 Dispose of contents/container to....  
P262 Do not get in eyes, on skin, or on clothing.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.

P310 Immediately call a POISON CENTER or doctor/physician.

P322 Specific measures (see ...on this label).

P361 Remove/Take off immediately all contaminated clothing.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/container to.....

P273 Avoid release to the environment.

P391 Collect spillage. Hazardous to the aquatic environment

P501 Dispose of contents/container to.....

#### **Hazard statements**

H300 Fatal if swallowed

H310 Fatal in contact with skin

H400 Very toxic to aquatic life

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: DEMETON O
Synonyms	: Phosphorothioic acid, O,O-diethyl O-[2-(ethylthio)ethyl] ester, Demetonthione
CAS	: 298-03-3
EC number	: 206-053-8
MF	: C <sub>8</sub> H <sub>19</sub> O <sub>3</sub> PS <sub>2</sub>
MW	: 258.34

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## SECTION 4: First aid measures

### **First Aid Measures**

#### **General advice**

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

#### **Eye contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

#### **Skin Contact**

Wash off immediately with plenty of water.

#### **Inhalation**

Immediate medical attention is required Remove to fresh air If not breathing, give artificial respiration Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation

#### **Ingestion**

Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink

plenty of water.

**Self-protection of the first aider**

Remove all sources of ignition.

**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****Suitable Extinguishing Media**

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

**Unsuitable Extinguishing Media**

No information available.

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

No information available.

**Hazardous combustion products**

Hydrogen sulfide. Carbon oxides.

**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 Wear self-contained breathing apparatus and protective suit.

for firefighters

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## SECTION 6: Accidental release measures

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

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas.

**Environmental precautions**

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

See Section 12 for additional Ecological Information. Should not be released into the environment.

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

#### **Methods for containment**

Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

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

Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

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

### **Precautions for safe handling**

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

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

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

#### **Storage Conditions**

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. 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**

Tight sealing safety 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**

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

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## SECTION 9: Physical and chemical properties

### **Information on basic physicochemical properties**

Physical State	liquid
Appearance	No information available
Odor	No information available
pH	No information available
Melting point/freezing point	- 6.28 °C
Boiling point	118 °C
Flash point	45 °C
Liquid Density	1.1 g/cm <sup>3</sup>
Evaporation rate	No information available
Upper flammability limits	5.3%
Lower flammability limit	1%
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	2g/L(room temperature)
Solubility in other solvents	No information available
Partition coefficient	3.21
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Density and/or relative density	1.1190
Solubility	Chloroform (Slightly), Ethyl Acetate (Slightly)
Colour	Colourless

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## 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**

Heat, flames and sparks.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Hydrogen sulfide. Carbon oxides.

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## 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**

Prolonged or repeated exposure increases the risk. Possible risk of irreversible effects. Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

**Chemical name ACGIH IARC NTP OSHA****Demeton-O - Group**

## 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)

8 mg/kg

#### ATEmix (dermal)

5 mg/kg

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## SECTION 12: Ecological information

### Ecotoxicity

May cause long lasting harmful effects to aquatic life

0% of the mixture consists of component(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. Should not be released into the environment.

### Contaminated packaging

Do not reuse container.

### Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

### California Hazardous Waste Status

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Demeton-O 298-03-3	Toxic

## SECTION 14: Transport information

### DOT

**UN/ID no**

UN2929

**Hazard Class**

6.1

**Subsidiary class**

3

**Packing Group**

I

**Proper shipping name**

Toxic liquids, flammable, organic, n.o.s.

**Description**

UN2929, Toxic liquids, flammable, organic, n.o.s. (Demeton-O), 6.1 (3), I, POISON

**Emergency Response Guide Number**

131

### IMDG

**UN/ID no**

UN2929

**Hazard Class**

6.1

**Subsidiary hazard class**

3

**Packing Group**

I

**Proper shipping name**

Toxic liquid, flammable, organic, n.o.s.

**Description**

UN2929, Toxic liquid, flammable, organic, n.o.s. (Demeton-O), 6.1 (3), I, (45°C c.c.)

**Special Provisions**

274, 315

**EmS-No**

F-E, S-D

### IATA

**UN/ID no**

UN2929

**Hazard Class**

6.1

**Subsidiary hazard class**

3

**Packing Group**

I

**Proper shipping name**

Toxic liquid, flammable, organic, n.o.s.

**Description**

UN2929, Toxic liquid, flammable, organic, n.o.s. (Demeton-O), 6.1 (3), I

**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
Demeton-O	-	-	-	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**

Yes

**Fire hazard**

Yes

**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**

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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.