

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

Catalogue Number	CS-T-15221
Product Name	Demeton-S
CAS No.	126-75-0
Category	Pesticide Standards
Synonyms	O,O-diethyl S-(2-(ethylthio)ethyl) phosphorothioate
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email sales@clearsynth.com for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Not available

2.2 Label Elements

Signal Word: Warning



Hazard Statement(s)

Code	Statement
H300	Not available
H310	Not available

Precautionary Statement(s)

Code	Statement
P262	Not available
P264	Wash hands thoroughly after handling.
P270	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P316	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P316	Not available
P321	Specific treatment (see ... on this label).
P330	Not available
P361+P364	Not available
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Demeton-S

CAS Number : 126-75-0

Molecular Formula : C8H19O3PS2

Molecular Weight : 258.33

Parent Chemical : -

Synonyms : O,O-diethyl S-(2-(ethylthio)ethyl) phosphorothioate

Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures

- General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms occur or persist.
- Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
- Skin contact: Wash with plenty of soap and water. Seek medical attention if irritation or symptoms develop.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
- Ingestion: Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Seek immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

- Not available.

4.3 Indication of immediate medical attention and special treatment needed

- Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

- Suitable extinguishing media: Use extinguishing agent suitable for surrounding fire (e.g., water spray, foam, dry chemical, carbon dioxide).
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products: Not available.
- Specific hazards: May decompose under fire conditions; avoid inhalation of smoke/fumes.

5.3 Advice for firefighters

- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Cool containers with water spray if exposed to fire.
- Prevent fire-fighting runoff from entering drains/waterways.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Evacuate unnecessary personnel. Avoid contact with skin and eyes.
- Provide adequate ventilation.
- Wear appropriate personal protective equipment (see Section 8).

6.2 Environmental precautions

- Avoid release to the environment. Prevent entry into drains, surface water, and soil.

6.3 Methods and material for containment and cleaning up

- Contain spill. Absorb with inert material (e.g., sand, earth, vermiculite).
- Collect into suitable, labeled containers for disposal.
- Clean contaminated area with appropriate cleaning methods. Dispose of waste in accordance with local regulations.

6.4 Reference to other sections

- See Section 8 for exposure controls/personal protection and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Avoid breathing vapors/mists/dust.
- Avoid contact with skin, eyes, and clothing.
- Use only with adequate ventilation.
- Do not eat, drink, or smoke when using this product.

- Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

- Store in tightly closed container in a cool, dry, well-ventilated place.
- Protect from heat and sources of ignition.
- Keep away from incompatible materials. Incompatibilities: Not available.

7.3 Specific end use(s)

- Pesticide standard / laboratory use. No data available for additional specific uses.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls

- Engineering controls: Use local exhaust ventilation or general ventilation to minimize exposure.
- Personal protective equipment (PPE):
 - Eye/face protection: Safety glasses with side shields or chemical splash goggles.
 - Skin protection: Wear protective gloves and protective clothing appropriate to the task.
 - Respiratory protection: If ventilation is inadequate, use appropriate respiratory protection.
 - Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available

Property	Value
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

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10.1 Reactivity

- No data available.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- No data available.

10.4 Conditions to avoid

- Heat, flames, sparks, and other ignition sources. Other conditions: Not available.

10.5 Incompatible materials

- Not available.

10.6 Hazardous decomposition products

- Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: The daily administration of 0.75 mg/kg of Demeton-S for 3 days caused a progressive decrease in the cholinesterase activity of the brain, serum and submaxillary glands. The IC50s for inhibition of cortical AChE

activity were: demeton-S, 2.9 μ M. The IC50s for inhibition of hippocampal AChE activity were: demeton-S, 1.9 μ M. All organophosphates competed with CD binding. The inhibition constants (Kis) for inhibition of CD binding in rat cortical membranes ranged from 0.004 to 51 μ M. The Kis in the hippocampal membranes varied from 0.004 to 25 μ M. The IC50s for inhibition of AChE activity and Kis for competing with CD binding were significantly correlated in both tissues.

- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: No data available.
- Reproductive toxicity: No data available.
- STOT-single exposure: No data available.
- STOT-repeated exposure: Groups of 12 to 18 female rats fed 50 ppm (48% Demeton-S) for 16 weeks showed signs of poisoning and the growth-rate was affected. No histological changes were observed. Groups receiving 10 and 20 ppm showed severe inhibition of the brain and blood cholinesterase activity, while 3 ppm still gave 30% inhibition of blood cholinesterase activity. One ppm did not cause significant inhibition. With daily doses of 2.5 mg of demeton (30% Demeton-S per kg body-weight) for 48 days, no toxic changes were observed (10 animals), but there was an inhibition of blood cholinesterase activity.
- Aspiration hazard: No data available.

Likely routes of exposure

- MAY BE ABSORBED! Muscle twitching. Further see Inhalation.

Symptoms related to the physical, chemical and toxicological characteristics

- Groups of 12 to 18 female rats fed 50 ppm (48% Demeton-S) for 16 weeks showed signs of poisoning and the growth-rate was affected. No histological changes were observed. Groups receiving 10 and 20 ppm showed severe inhibition of the brain and blood cholinesterase activity, while 3 ppm still gave 30% inhibition of blood cholinesterase activity. One ppm did not cause significant inhibition.

SECTION 12: Ecological information

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12.1 Toxicity

- No data available.

12.2 Persistence and degradability

- No data available.

12.3 Bioaccumulative potential

- No data available.

12.4 Mobility in soil

- No data available.

12.5 Results of PBT and vPvB assessment

- Not available.

12.6 Endocrine disrupting properties

- No data available.

12.7 Other adverse effects

- No data available.

SECTION 13: Disposal considerations

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13.1 Waste treatment methods

- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains or the environment.
- Contaminated packaging: Dispose of as hazardous waste unless adequately cleaned.
- Waste codes: Not available.

SECTION 14: Transport information

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- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.
- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

SECTION 15: Regulatory information

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

- Regulatory listings/status: Not available.

15.2 Chemical safety assessment

- No data available.

SECTION 16: Other information

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- Product name: Demeton-S
- Catalog No.: CS-T-15221
- CAS No.: 126-75-0
- Synonyms: O,O-diethyl S-(2-(ethylthio)ethyl) phosphorothioate
- Category: Pesticide Standards
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

Disclaimer

- The information provided is based on available product information and is intended for SDS purposes. Data not available has been indicated as such. Users are responsible for compliance with applicable laws and regulations.

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