

Safety data sheet as per Commission Regulation (EU) 2015/830

Product: O,O-dimethyl thiophosphoramidate (DMPAT)



PRASOL

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

1.1 Product identifier

Trade name O,O-dimethyl thiophosphoramidate (DMPAT)
Chemical Name O,O-dimethyl thiophosphoramidate (DMPAT)

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

Relevant identified uses In the manufacture of organophosphorus pesticides, oil & gasoline additives, flame retardants, flotation agents
Uses identified against Food additive, medicinal products, cosmetic products

1.3 Details of the supplier of the safety data sheet:

Manufacturer Prasol Chemicals Limited (Formerly Prasol Chemicals Private Limited)
Prasol House, Plot No.A-17/2/3,
T.T.C. Industrial Area, Khairne M.I.D.C.,
Navi Mumbai - 400 710.
Maharashtra, India.
Telephone +91-22-27782555/ 61952500
Telefax +91-22-61952577
e-mail address sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone +91-22- 27782555/ 61952500
Language English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Acute Toxicity- Oral	Category 4	H302	Harmful if swallowed
Skin irritation	Category 3	H316	Causes mild skin irritation
Eye irritation	Category 2B	H320	Causes eye irritation
Specific Target Organ Toxicity- Single Exposure	Category 3	H335	May cause respiratory irritation

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard
pictograms



GHS07

Signal word Warning

Hazard statements	H302	Harmful if swallowed
	H316	Causes mild skin irritation
	H320	Causes eye irritation
	H335	May cause respiratory irritation

Precautionary statements

General	P103	Read label before use.
Prevention	P261	Avoid breathing fumes/ gas/ mist/ vapours/ spray.
	P264	Wash hands thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P271	Use only outdoors or in a well-ventilated area.
Response	P301+P317	IF SWALLOWED: Get medical help.
	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P319	Get medical help if you feel unwell.
	P330	Rinse mouth.
	P332 +P317	If skin irritation occurs: Get medical help
	P337 +P317	If eye irritation persists: Get medical help
Storage	P403+P233	Store in a well ventilated place. Keep container tightly closed
	P405	Store locked up.
Disposal	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Not a PBT, vPVB substance according to the criteria of REACH regulation

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SECTION 3: Composition/information on ingredients

3.1 Substances

Name	O,O-Dimethyl Phosphoramidothioate
CAS Number	17321-47-0
EC Number	241-342-2
Molecular Formula	C ₂ H ₈ NO ₂ PS
Molecular Weight	141.13

Ingredient	Classification	Concentration (%)
O,O-Dimethyl Phosphoramidothioate (DMPAT)	Ac. Tox. Oral 4, Skin Irrit. 3, Eye Irrit. 2B, STOT SE 3; H302, H316, H320, H335	95 - 100
3.2 Mixtures	not applicable	

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

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

After inhalation After inhalation of vapours during processing, remove the patient to fresh air at once.

After skin contact Take off all contaminated clothing immediately. If symptoms persist, call a physician. Wash off immediately with soap and plenty of water.

After eye contact Rinse immediately with plenty of water and seek medical advice.

After swallowing Do not induce vomiting and seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed Salivation, lacrimation, blurry vision

4.3 Indication of any immediate medical attention and special treatment needed Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray, CO₂, dry powder, foam

Unsuitable extinguishing media water jet

5.2 Special hazards arising from the substance or mixture Closed container may rupture if strongly heated.

Combustible liquid.

Explosive mixtures may occur at temperatures at or above the flashpoint.

5.3 Advice for firefighters Cool closed containers exposed to fire with water spray.

Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Avoid breathing vapours, mist or gas during processing.

Ensure adequate ventilation

6.2 Environmental precautions

Do not allow to enter sewers, surface or ground water.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste.

Keep in suitable, closed containers for disposal.

Suitable binder: sand

6.4 Reference to other sections

Section 8 for information on personal protection equipment.

Section 13 for disposal information

SECTION 7: Handling and storage

7.1 Precautions for safe handling If possible, use material transfer, metering and blending plants that are closed. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion Follow normal measures for preventive fire protection.

Storage

German storage class: 10 - Combustible liquids

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Mechanical exhaust required.

Packaging material

Metal, HDPE drums

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	Incompatibility	None identified
	Advice on common storage	Observe prohibition against storing together!
	Storage stability	Maximum Storage Temperature: 25°C
7.3	Specific end use(s)	No further relevant information available

SECTION 8: Exposure controls/personal protection

8.1	Control parameters	Occupational Exposure Limit	No known occupational exposure limit values.		
8.2	Exposure controls	Appropriate engineering controls	If possible, use material transfer, metering and blending plants that are closed		
		Personal protective equipment			
		Eye/ face protection	closed goggles, face shield		
		Skin protection			
		Hand protection	Type of material	Thickness	Breakthrough time
			Butyl-rubber	0.5 mm	> 480 min
			Polychloroprene (PCP)	0.5 mm	110 min
		Body protection	Boots, body suit		
		Respiratory protection	NIOSH approved respirator; Avoid inhaling vapours.		
		Thermal hazards	Combustible liquid, possibility of decomposition on heating at 80°C for 5 hours		
		Industrial hygiene	Avoid contact with skin and eyes. Remove immediately all contaminated clothing. Keep working clothes separately. Smoking, eating and drinking should be prohibited in the application area.		

SECTION 9: Physical and chemical properties

9.1	Information on basic physical and chemical properties	Appearance	Colorless to pale yellow liquid
		Odour	Pungent, ammonia-like
		Odour threshold	no data available
		pH	no data available
		Melting point	no data available
		Boiling point	150°C at 5 mm Hg
		Flash point	110°C (open cup)
		Evaporation rate	no data available
		Flammability (solid, gas)	not applicable (product is a liquid)
		Flammability limits	no data available
		Vapour pressure	0.4Pa at 30°C
		Vapour density	not determined
		Relative density	1.27 at 25°C
		Solubility in water	no data available
		Partition coefficient	no data available
		Ignition temperature	no data available
		Decomposition temperature	no data available
		Viscosity at 25°C	5cSt
		Explosive properties	no explosive properties based on chemical structure
		Oxidizing properties	no oxidizing properties based on chemical structure
9.2	Other information		no further information

SECTION 10: Stability and reactivity

10.1	Reactivity	No hazardous reaction when handled and stored according to provisions.
10.2	Chemical stability	Relatively stable when stored in coated, unopened drums below 25°C.
10.3	Possibility of hazardous reactions	Spontaneous decomposition may start on heating; rapid decomposition may start at above 80°C.
10.4	Conditions to avoid	Extremes of temperature and direct sunlight.
10.5	Incompatible materials	Acids, bases, reducing agents, strong oxidizing agents
10.6	Hazardous decomposition products	formation of volatile, toxic, malodorous, irritant and inflammable compounds such as hydrogen sulphide, hydrogen chloride, sulphur dioxide, mercaptans, carbon oxides and nitrogen oxides

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral rat 410mg/kg bw **Category 4, H302**

LD50 Inhalation rat 2.33mg/kg bw

LD50 Dermal rat >2000mg/kg bw

Skin irritation Irritating 24 h (rabbit) **Category 3, H316**

Serious eye irritation Irritating 24 h (rabbit) **Category 2B, H320**

Respiratory or skin sensitization Not determined as substance is irritating to skin

Germ cell mutagenicity non mutagenic (Ames test)

Carcinogenicity no data available

Reproductive toxicity No data available

STOT-single exposure Causes respiratory irritation **Category 3, H335**

STOT-repeated exposure No further data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Toxicity to fish No data available

Toxicity to aquatic invertebrates No data available

Toxicity to aquatic algae and cyanobacteria No data available

12.2 Persistence and degradability

Biodegradation 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 a PBT, vPvB substance according to the REACH regulation

12.6 Other adverse effects

No further data

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Observe all federal, state, and local environmental regulations.

Contact a licensed professional waste disposal service to dispose of this material.

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Do not dispose in sewage.

SECTION 14: Transport information

	ADR/RID	IMDG	ICAO/IATA
14.1 UN Number	2902	2902	2902
14.2 UN proper shipping name	Pesticides, liquid, toxic, n.o.s. (O,O-dimethyl thiophosphoramidate)		
14.3 Transport hazard class	6.1	6.1	6.1
14.4 Packaging group	II	II	II
14.5 Environmental hazards	not a marine pollutant		
14.6 Special precautions for the user	Combustible liquid; Flash point 110°C (open cup) Irritating to the eyes. Keep dry. Keep separated from foodstuffs		
	EmS number	-	
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	See regulatory information for transport approval		

SECTION 15: Regulatory information

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

Major accident hazard **Seveso III** no

International Chemical Inventory Status

USA (TSCA) Listed (Tracking No. 207795)

Canada (NDSL) listed

Australia (AICS) listed

Korea (KECL) Listed (KE Number 28520)

Taiwan (TCSI) listed

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15.2 Chemical safety assessment A Chemical Safety Assessment will be carried out at the time of REACH registration

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Further information:

Sections in which changes have been made since the last version are marked with a diamond ♦ in the left hand margin.

Abbreviations and acronyms in English language:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification for Labeling and Packaging
NDSL	Non Domestic Substances List
EC	European Commission
EC50	Half maximal effective concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
IATA	International Air Transport Association
IBC	International Bulk Chemical
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
KECL	Korea Existing Chemicals List
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
MARPOL	International Convention for the Prevention of Pollution from Ships
PBT	Persistent, bioaccumulative and toxic substances
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT	Specific target organ toxicity
TSCA	Toxic Substances Control Act
UN	United Nations
vPVB	(very) Persistent, (very) Bioaccumulative

Sources

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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