



MERPAN 50 WP

R-5782.DPD

1. Identification of the substance/mixture and of the company/undertaking

Trade name : MERPAN 50 WP  
Product code : R-5782.DPD  
Chemical formula : C<sub>9</sub>H<sub>8</sub>Cl<sub>3</sub>NO<sub>2</sub>S  
Use : Fungicide  
Company identification : Makhteshim Chemical Works Ltd.  
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2. Hazards identification

Human health hazards : Irritating to eyes.  
May cause sensitization by skin contact.  
Limited evidence of a carcinogenic effect.  
Environmental hazard : Very toxic to aquatic organisms.

3. Composition/information on ingredients

This product is considered to be hazardous and contains hazardous components.

Substance name	Value(s)	CAS No	EC No	Index No	REACH Reg.	Classification
Captan (ISO)	50 %	133-06-2	205-087-0	613-044-00-6	----	Carc. Cat. 3; R40 T; R23 Xi; R41 R43 N; R50 (M fact. = 10)

4. First aid measures

Undesirable human health effects  
Repeated exposure may cause contact dermatitis. .  
Eye contact : Redness , tears .  
First aid  
Ingestion : Do not induce vomiting. Wash out mouth with plenty of water.  
Never give anything by mouth to an unconscious person.  
Consult a doctor.  
Skin contact : Remove affected clothing and wash all exposed skin area with soap and water,  
followed by warm water rinse. Consult a doctor in the event of any complaints. .  
Eye contact : If pain persists, consult an eye specialist. .  
Wash off with plenty of water  
Inhalation : Remove victim to fresh air. Keep victim warm and at rest. If not breathing, give  
artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.  
Note to physician : No specific antidote known. Treat symptomatically and give supportive therapy. If  
ingested perform gastric lavage and administer activated charcoal.

5. Fire-fighting measures

Extinguishing media : For small fire : foam , dry chemical , carbon dioxide .  
For large fire: foam , water fog , water spray .



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**5. Fire-fighting measures (continued)**

- Special exposure hazards** : Thermal decomposition generates : carbon dioxide , carbon monoxide , nitrogen oxides , hydrogen chloride , sulfur oxide , CSCl<sub>2</sub> .
- Protection against fire** : Wear proper protective equipment. Use self-contained breathing apparatus when in close proximity to fire.
- Special procedures** : Fight fires from a protected location . Dike fire control water for later disposal. .

**6. Accidental release measures**

- Personal precautions** : Use appropriate protection (see section 8).
- Environmental precautions** : Dispose of this material and its container at hazardous or special waste collection point If the product has contaminated surface water, inform the appropriate authorities.
- After spillage and/or leakage** : Collect spilled material with shovel, place into a clean container and cover container loosely .

**7. Handling and storage**

- Handling** : Do not breathe dust. Avoid contact with skin and eyes. .
- Storage** : Keep locked up Keep container tightly closed. . Keep only in the original container in a cool, well ventilated place. Keep container dry .
- Packing** : Woven polypropylene big bags .  
Woven polypropylene bags with multi-ply paper inserts and polyethylene lining .

**8. Exposure controls/personal protection**

- Industrial hygiene** : Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower . Wash clothing before re-using. Wash hands thoroughly after handling.
- **Respiratory protection** : During spraying wear suitable respiratory equipment.
- **Skin protection** : Wear suitable protective clothing Chemical resistant boots.
- **Hand protection** : Wear suitable gloves.
- **Eye protection** : Chemical goggles or safety glasses.
- TLV-TWA [mg/m<sup>3</sup>]** : (USA) Captan 5 , A3 (1996)

**9. Physical and chemical properties**

- Physical state** : Amorphous powder
- Colour** : Off-white
- Odour** : Faint characteristic
- pH value in distilled water** : (5%) 5.0-8.5
- Molecular weight** : 300.61 ( Captan )
- Melting point [°C]** : 158 - 164 ( Captan )
- Final boiling point [°C]** : Decomposes ( Captan )



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9. Physical and chemical properties (continued)

Bulk density	: 550-650 g/l (full compaction)
Vapour pressure	: $2.01 \times (10)^{-4}$ Pa (50°C - Pure) ( Captan )
Solubility in water	: Insoluble ( Captan )
Log P octanol	: KOW = 610 ( Captan )
Flammability	: Not flammable
Explosion limits	: Not explosive

10. Stability and reactivity

Physico-chemical stability	: Stable under normal dry conditions.
Hazardous decomposition products	: Thermal decomposition generates : carbon dioxide , carbon monoxide , nitrogen oxides , sulfur oxide , hydrogen chloride , CSCI2 .
Hazardous reactions	: Alkali materials, such as lime and Bordeaux mixture will reduce fungicidal activity .
Hazardous Polymerization	: Will not occur.
Conditions to avoid	: Protect from sunlight , sources of heat , open flame , moisture .

11. Toxicological information

Oral, Rat LD50 [mg/kg]	: > 5000
Dermal, Rat LD50 [mg/kg]	: > 2000
Inhalation, Rat LC50 [mg/l/4h]	: > 2.6
Skin corrosion/ irritation	: Mildly irritating
Serious eye damage/ irritation	: Irritating to eyes.
Respiratory or skin sensitization	: Guinea pig maximization test: Moderate sensitizer
Carcinogenicity	: Captan: A two-year feeding study of Captan indicated duodenal tumors in mice after repeated administration of high dose levels. The NOEL (No Observed Effect Level) was 400 ppm. No evidence of carcinogenicity was observed in long-term studies with rats. Information on the mechanism of these tumors establishes a threshold for the duodenal tumors, and indicates that this tumor type is not relevant for human risk assessment at likely exposure levels.
Germ cell mutagenicity	: Captan: Not mutagenic ( in-vivo tests )
Reproductive toxicity	: Captan: Not teratogenic in animal experiments

12. Ecological information

Ecological effects information	: No ecological information is known on the product. The data below are for Captan : Very toxic to aquatic organisms. ( algae and fish ) in laboratory experiments . Low toxicity in actual use, due to its hydrolytic instability .
LD50 Birds [mg/kg]	: > 2000
Persistence and degradability	: The product is readily biodegradable .
Mobility	: Product does not leach to ground water.



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12. Ecological information (continued)

Bioaccumulative potential : Captan Does not bioaccumulate in aquatic organisms

13. Disposal considerations

Disposal : Dispose in a safe manner in accordance with local/national regulations.

14. Transport information

- UN No. : 3077  
- Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (50% captan)  
- Packing group : III  
- Class : 9  
- H.I. nr : 90  
- ADR/RID  
- ADR class : 9  
- ADR Packing group : III  
- ADR Symbols : 9  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

15. Regulatory information

EU Classification : This product is provisionally labelled by the supplier in accordance with the suppliers understanding of the EU regulations

Symbol(s)



: Xn: Harmful.  
N: Dangerous for the environment.

R Phrase(s)

: R36 - Irritating to eyes.  
R40 - Limited evidence of a carcinogenic effect.  
May cause sensitization by skin contact.  
R50 - Very toxic to aquatic organisms.

S Phrase(s)

: S02 - Keep out of the reach of children.  
S13 - Keep away from food, drink and animal feedingstuffs.  
S20/21 - When using, do not eat, drink or smoke.  
S24/25 - Avoid contact with skin and eyes.  
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.  
S35 - This material and its container must be disposed of in a safe way.  
S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. Other information

Recommended uses and restrictions : None.



MAKHTESHIM  
CHEMICAL WORKS LTD.

## MATERIAL SAFETY DATA SHEET

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### 16. Other information (continued)

List of full text of R-phrases in section 3. : R23 - Toxic by inhalation.  
R40 - Limited evidence of a carcinogenic effect.  
R41 - Risk of serious damage to eyes.  
R43 - May cause sensitization by skin contact.  
R50 - Very toxic to aquatic organisms.

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