UNITED CHEMICALS
युनाईटिड केमिकल्स

Admn. Off. : B-371, 1st Floor, Meera Bagh, Delhi-110063 (India)
Ph. : 25258770, 25258771, 25258772, 42334229

E-mail : utc_chemicals@hotmail.com
info@unitedchemicals.in

MATERIAL SAFETY DATA SHEET

PRODUCT : Captan 75 % WG

PRODUCT DESIGNATION : Fungicide

Section 1. Product & Company Identification

Common Name	:	Captan
Grade	:	Formulation
Active Ingredient	:	Captan
Chemical Name of Active Ingredient (IUPAC)	:	2-[(trichloromethyl)sulfanyl]-3a,4,7,7atetrahydro-1H-isoindole-1,3(2H)-dione
Chemical Family of A. I.	:	Fungicide
Molecular Formula of A. I.	:	C9H8Cl3NO2S
Molecular Mass of A. I.	:	300.6 g/mol
Manufacturer & Supplier	:	**M/s United Chemicals** **Head office**:B-371, 1st Floor, Meera Bagh, New Delhi, **Factory**:15/1, 15/2, 15/3, Industrial Estate, Vidisha, (M.P)
Telephone Number	:	+91-11-25258770

Section 2. Composition / Information on Ingredients

Name of Components	Concentration% w/w
Captan a.i.	75.00%w/w
Inert ingredient	25.00%w/w
TOTAL	**100.00% w/w**

Section 3. Hazards Identification

EMERGENCY OVERVIEW

- May be harmful if swallowed.
- Causes severe eye irritation.
- Avoid breathing dusts or spray mist.

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- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children

Section 4. First Aid Measures

If in Eyes : Flush immediately with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

If in Skin : Wash thoroughly with soap and water. Remove contaminated clothing and shoes and launder.

If Inhaled : Remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. Get medical attention.

If Swallowed : Offer a glass of water or milk to drink. Call a physician or poison control center. Do not induce vomiting unless directed.

Antidote: There is no specific antidote. Treat symptomatically.

Section 5. Fire Fighting Measures

Flashpoint (method) : Will not flash.

Fire and explosion hazards : Can burn in fire, releasing irritating and toxic gases due to thermal. decomposition or combustion.

Extinguishing Media : Use foam, or dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

Fire fighting instructions : Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam of dry chemical fire extinguishing systems is preferred to prevent environmental damage from excessive water run off.

Fire fighting equipments : Self- contained breathing apparatus with full face piece. Full fire fighting turn-out gear (Bunker gear).

Hazardous Combustion Products : Hydrogen chloride. Oxides of nitrogen, hydrogen, carbon, sulfur.

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Section 6. Accidental Release Measures

Clean up spills immediately, observing precautions described in section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Small spill : Vaccum or sweep up material and place in a container for reuse or disposal

Large spill : Vaccum or sweep up material and place in appropriate container for reuse or disposal. After removal, flush contaminated are thoroughly with water. Pick up wash liquid with inert absorbent and place in a chemical waste container for disposal. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

Section 7. Handling & Storage

Handling:

Use only in a well-ventilated area. Minimize dust generation and accumulation. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Use only as directed on the label

Storage:

Keep pesticide in original container. Keep container tightly closed when not in use. Protect from excessive heat. Store in a cool dry place.

Section 8. Exposure Control, Personal Protection

Causes irreversible eye damage Inform workers orally by posting warning signs at entrances to treated areas

Engineering controls Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit, Facilities storing or utilizing this material should be equipped with an eye-wash facility and a safety shower

PERSONAL PROTECTIVE EQUIPMENT

Eye protection Safety googles Clothing Long-sleeved shirt and long pants, shoes plus socks, chemical resistant apron when participating in dip treatments

Gloves Chemical resistant gloves made of any water proof material (except applicators driving motorized equipment)such as barrier laminate, butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

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Respirator Not normally required. If vapors or dusts exceed acceptable levels, wear a NIOSH approved pesticide respirator.

User safety recommendations Wash hand before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticides get inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Section 9. Physical and Chemical Properties

Appearance / state	:	Beige granules, Solid
Colour	:	Organic
Odour	:	Slight musty
Ph	:	5
Density	:	0.70g/ml @ 20 degree C
% volatile	:	<1%
Solubility	:	insoluble
Vapour pressure	:	2.01 x 10- 4 Pa at 50 degrees C

Section 10. Stability & Reactivity

Chemical stability : Stable, however may decompose if heated

Conditions to avoid: Avoid exposure to excessive heat and high moisture conditions for prolonged periods

Incompatibility with other materials : Alkaline and acidic conditions and materials

Hazardous decomposition products : Hydrogen chloride. Oxides of hydrogen, nitrogen, sulfur and carbon

Hazardous polymerization : Product will not undergo polymerization

Section 11. Toxicological Information

Acute Oral Toxicity : LD_{50} for rats **:** >5000 mg/kg

Acute Dermal Toxicity : LD50 for rats **:** <2000 mg /kg

Acute Inhalation : LC50 (4h) rats **:** >2.0 mg/l

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Eye Irritation : Non irritant

Skin Irritant : Non irritant

Skin sensitization : Moderate skin sensitizer

Section 12. Ecological Information

Birds Acute oral LD_{50} for Bobwhite Quail and Mallard Ducks >2000 mg/kg

Aquatic Toxicity : Rainbow Trout: LC50: (73.2 µg/L) Bluegill Sunfish: LC50: (72 µg/L)

Daphnia magna: 48 hour LC50: (7-10 mg/L)

Bees: Acute LD50: 46.26 µg/bee

Section 13. Disposal Consideration

Waste treatment methods : do not dispose in household garbage

Sewage disposal recommendation : do not dispose of waste into sewer.

Waste disposal recommendation : dispose in a safe manner in accordance with local/national regulations.

Additional information : clean up even minor leaks or spills is possible without unecessary risk.

Section 14. Transport Information

IMDG Classification

Shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Captan)
Class	:	9
Packing group	:	III
UN number	:	3077
Marine pollutant	:	Yes

Section 15. Regulatory Information

Risk phrases :

May cause sensitization by skin contact.

Irritating to eyes.

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Safety phrases :

Keep out of reach of children.

Keep away from food, drink and animal feeding stuffs.

When using do not eat, drink or smoke.

Avoid contact with skin.

Section 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Safety Division :UNITED CHEMICALS, SAFETY DIVISION