



MATERIAL SAFETY DATA SHEET

Captan WP

IDENTIFICATION OF THE SUPPLIER:

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IDENTIFICATION OF PRODUCT:

Product Name: Captan WP
Active ingredient: Captan
Formulation type: Wettable powder (WP)
Chemical Name: 3a, 4, 7, 7a-tetrahydro-2-[(trichloromethyl)thio]-1H-isoindole-1, 3(2H)-dione
Chemical formula: C₉H₈Cl₃NO₂S
Molecular weight: 300.6

COMPOSITION/ INFORMATION:

<i>Active ingredient</i>	CAS#	g/kg
Captan	[133-06-2]	800

Inert ingredient

Up to 1 Kg

HAZARDS IDENTIFICATION:

HSNO Classifications: 6.3B, 6.5B, 6.7B, 8.3A, 9.1A

Most Important Hazards: TOXICITY

Warning –

May cause mild skin irritation.





May cause sensitization from prolonged skin contact.

Harmful – suspected of causing cancer.

Limited evidence of a carcinogenic effect in animal studies.

This product is corrosive and may cause eye damage.

Avoid contact with skin and eyes. Avoid inhalation of spray mist.

ECOTOXICITY

Very toxic to aquatic organisms.

Avoid contamination of any water supply with product or empty container.

FIRST AID PROCEDURE:

Effects and symptoms:

Skin contact: Repeated exposure may cause contact dermatitis.

First-aid measures:

Inhalation: Remove victim to fresh air. Keep victim warm and at rest. If breathing is difficult give oxygen. If not breathing, apply artificial respiration. Get medical attention.

Ingestion: Induce vomiting. Never give anything by mouth to an unconscious person. Wash out mouth with water. Consult a doctor.

Skin contact: Remove contaminated clothing. Wash away remainder with water and soap. Consult a doctor in the event of any complaints.

Eye contact: Wash out with plenty of water for at least 15 minutes. If pain persists, consult an eye specialist.

Notes to a physician: There is no specific antidote. Treat symptomatically and give supportive therapy. If ingested perform gastric lavage and administer activated charcoal.

FIRE FIGHTING MEASURES:

Extinguishing media

Suitable:

If involved in fire.

In case of a small fire: foam or dry chemical, carbon dioxide.

In case of a large fire: Water spray, fog or regular foam.

Special Firefighting Procedure: Fight fires from a protected location.

Dike fire control water for later disposal.

Hazardous thermal (de)composition products:

CSCI_2 , HCl , SOX , CO , CO_2





Protection of fire-fighters: Wear suitable protective clothing. Self-contained breathing apparatus.

PHYSICAL AND CHEMICAL CHARACTERISTIC:

Physical state: powder

Colour: Light Brown

Odour: Faint odour (characteristic)

Molecular Weight: Captan 300.61

Boiling point: Captan decomposes

Melting Point: Captan: 158-164oC

Vapour pressure: Captan: 2.4×10^{-4} Pa at 40 oC (Pure)

Solubility in water: Captan: Insoluble in water

Octanol/water partition coefficient Captan: $Kow = 610$

Flammability: Not flammable

Explosion properties: Not explosive

ACCIDENTAL RELEASE MEASURE:

Personal precautions: Wear suitable protective clothing.

Environmental precautions: Dispose of this material and it's container at hazardous or special waste collection point.

If the product has contaminated surface water, inform the appropriate authorities.

Methods for cleaning up: Collect spilled material with shovel, place into a clean container and cover container loosely.

HANDLING AND STORAGE:

Handling: 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.

Packaging materials:

Suitable: Multi-walled paper bag with plastic liner.





STABILITY AND REACTIVITY:

Stability: Stable under normal dry conditions

Conditions to avoid: Protect from (sun) light, open flame sources of heat and humidity

Materials to avoid: Alkali materials, such as lime and Bordeaux mixture will reduce fungicidal activity

Hazardous reactions: Hazardous polymerization will not occur

Hazardous decomposition products: $CSCI_2$, HCl, SOX, NOX, CO_2 , CO.

TOXICOLOGICAL INFORMATION:

Preparation: HSNO: Class 9.1A

Acute toxicity - Oral: LD50 > 2,000 mg/kg (rat)

Acute toxicity - Dermal: LD50 > 5,000 mg/kg (rat)

Acute toxicity – Inhalation: Not applicable

Skin irritation: Mildly irritating (rabbit).

Eye irritation: Moderately irritating (rabbit).

Sensitization : CAPTAN TECHNICAL: Guinea pig maximization test: skin sensitizer

Common name: **Captan**

Carcinogenicity: 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 400ppm. 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.

Mutagenicity: Not mutagenic (in-vivo tests)

Reproduction toxicity: Not teratogenic in animal experiments.

ECOLOGICAL INFORMATION:

Mobility: Captan does not leach to ground water.

Persistence/degradability: The product is readily biodegradable.

Bioaccumulative potential: Captan does not bioaccumulate in aquatic organisms.





Ecotoxicity: Very toxic to aquatic organisms (fish and algae), in laboratory experiments. Low toxicity in actual use, due to its hydrolytic instability.

LD50 > 2000 mg/kg birds

DISPOSAL CONSIDERATIONS

Methods of disposal: Container Disposal - Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle. Avoid contamination of any water supply with product or empty container.

REGULATORY INFORMATION:

UN Number 3077

Proper shipping name environmentally hazardous substance, Solid, N.O.S, (captan)

DG Class 9

Packing Group III

Hazchem Code 2X

Marine Pollutant Yes

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National transport regulations: Do not carry this product on a passenger service vehicle

