

## **MATERIAL SAFETY DATA SHEET**

### **SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

<b>COMPANY ADDRESS:</b>	<b>EMERGENCY TELEPHONE NUMBERS:</b>
MICRO FLO COMPANY	(800) 424-9300 (CHEMTREC, transportation and spills)
P.O. BOX 772099	(800) 900-4044 (Poison Control Center, human health)
MEMPHIS, TN 38117	(800) 345-4735 (ASPCA, animal health)

<b>PRODUCT NAME</b>	: CAPTAN 50W
<b>CHEMICAL NAME</b>	: N-Trichloromethylthio-4-cyclohexene-1,2-dicarboximide
<b>CHEMICAL FAMILY</b>	: phthalimide fungicide
<b>PRODUCT CODE</b>	: EPA Reg. No. 51036-166

### **SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS**

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Captan	50.0	133-06-2	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>

### **SECTION 3 - HAZARDS IDENTIFICATION SUMMARY**

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

**EMERGENCY OVERVIEW:** Off-white to tan powder with slight musty odor.

- May be harmful if swallowed or inhaled.
- Causes severe eye irritation.
- Avoid breathing dusts or spray mist.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.

#### **POTENTIAL HEALTH HAZARDS:**

**EYE** - Severely irritating to the eyes. If not removed promptly, will injure eye tissue, which may result in permanent damage. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

**SKIN** - Prolonged or repeated skin contact may cause irritation. Exposure marked by redness and swelling.

**INHALATION** - Spray mists, or dust concentrations may be harmful if inhaled. Moderately irritating to respiratory tract.

**INGESTATION** - May be harmful if swallowed.

**POTENTIAL PHYSICAL HAZARDS:** Can decompose at high temperatures forming toxic gases.

**ENVIRONMENTAL HAZARDS:** Toxic to fish and other water organisms. Keep out of waterways.

### **SECTION 4 - FIRST AID MEASURES**

**IF SWALLOWED:** Call a physician or Poison Control Center immediately. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solutions, or, if these are not available, large quantities of water. Avoid alcohol.

**IF IN EYES:** Flush with plenty of water. Get medical attention.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF ON SKIN:** Immediately wash skin with plenty of soap and water. Get medical attention if abnormal reaction occurs.

**NOTE TO PHYSICIAN:** Captan has a low mammalian toxicity. It is known to be extremely irritating to soft tissue such as eyes and nasal passages.

**ANTIDOTE:** None known. Treat symptomatically.

## **SECTION 5 - FIRE FIGHTING MEASURES**

**FLASHPOINT (method):** Will not flash.

**FLAMMABLE LIMITS (LFL-UFL):** N/A

**FIRE AND EXPLOSION HAZARD:** Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

**EXTINGUISHING MEDIA:** Use foam, 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 or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece. Full fire fighting turn-out gear (Bunker gear).

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrogen chloride. Oxides of nitrogen, hydrogen, carbon, sulfur.

## **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:** Vacuum or sweep up material and place in a container for reuse or disposal.

**LARGE SPILL:** Vacuum or sweep up material and place in appropriate container for reuse or disposal. After removal, flush contaminated area 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 AND STORAGE**

KEEP OUT OF REACH OF CHILDREN!

**HANDLING:** Use only in a well-ventilated area. Minimize dust generation and accumulation. May form flammable dust-air mixtures.

**STORAGE:** Keep away from food, feed and drinking water. Store in a well ventilated, dry place away from heat and moisture.

## **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

**EXPOSURE LIMITS (8 HOUR TWA):** (Refer to Section 3)

**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 eyewash facility and a safety shower.

**PERSONAL PROTECTIVE EQUIPMENT:**

**EYE PROTECTION** - Safety goggles.

**CLOTHING** - Long-sleeved shirt and long pants, Shoes plus socks, Chemical resistant apron when cleaning equipment, mixing, or loading.

**GLOVES** - Waterproof gloves.

**RESPIRATOR** - When handling in enclosed areas where exposure limits may be exceeded, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS:**

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. 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**

**PHYSICAL DESCRIPTION:** Off-white to tan powder.

**ODOR:** Slight musty.

**MOLECULAR WEIGHT (technical):** 300.6

**MOLECULAR FORMULA (technical):** C<sub>9</sub>H<sub>8</sub>Cl<sub>3</sub>NO<sub>2</sub>S

**BOILING POINT:** N/A

**MELTING/FREEZING POINT:** N/A

**BULK DENSITY:** 30 - 35 #/cu.ft.

**pH:** 5.0

**VAPOR PRESSURE:** N/A

**% VOLATILE:** < 1%

**WATER SOLUBILITY:** Completely soluble.

**SECTION 10 - STABILITY AND 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, carbon.

**HAZARDOUS POLYMERIZATION:** Product will not undergo polymerization.

**SECTION 11 - TOXICOLOGICAL INFORMATION****ACUTE TOXICITY:**

Oral LD<sub>50</sub> (rat) - > 5,000 mg/Kg

Dermal LD<sub>50</sub> (rat) - > 2,000 mg/Kg

Inhalation LC<sub>50</sub> (rat) - > 1.0 mg/L

Eye Irritation (rabbit) - Corrosive

Skin Irritation (rabbit) - Moderate

Sensitization (guinea pig) - Slight

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Acute asthma and/or other chronic pulmonary diseases due to inhalation of vapors or spray mists.

**CARCINOGEN STATUS:**

OSHA - Not listed.

NTP - Not listed.

IARC - Group 3.

The EPA has classified captan as a probable human carcinogen due to evidence of intestinal tumors in lab studies and captan's chemical similarity to other known carcinogens.

**MUTAGENIC DATA:** Mutagenic studies indicate that captan is either non-mutagenic or has very low mutagenicity in test animals.

**ADDITIONAL DATA:** Teratogenicity studies have been inconclusive and the EPA has concluded that captan does not produce birth defects.

## SECTION 12 - ECOLOGICAL INFORMATION

**ENVIRONMENTAL SUMMARY:** This pesticide is toxic to fish. Do not apply directly to water. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not clean equipment or dispose of equipment washwaters in a manner that will contaminate water resources.

**FISH TOXICITY:** (Technical)

96 hour LC<sub>50</sub>, Rainbow trout - unknown ug/L

96 hour LC<sub>50</sub>, Bluegill - 0.07 ug/L

**AVIAN TOXICITY:** (Technical)

Oral LD<sub>50</sub>, Bobwhite quail - > 2,000 mg/Kg

Oral LD<sub>50</sub>, Mallard duck - > 2,000 mg/Kg

**BEE TOXICITY:** Non-toxic.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**WASTE:** Pesticide wastes are acutely hazardous. Dispose of in accordance with applicable Federal, state and local laws and regulations.

**CONTAINER:** Refer to product label.

## SECTION 14 - TRANSPORT INFORMATION

**DOT SHIPPING DESCRIPTION:** Environmentally Hazardous Substance, Solid, N.O.S., (Captan 50%), 9, UN 3077, PG III, RQ

**DOT HAZARD CLASS:** 9

**UN NUMBER:** UN 3077

**DOT PACKING GROUP:** III

**DOT PRIMARY/SECONDARY LABEL:** Class 9

**DOT PRIMARY/SECONDARY PLACARD:** Class 9

**DOT EMERGENCY RESPONSE GUIDE#:** 171

## SECTION 15 - REGULATORY INFORMATION

**FIFRA:** All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

**OSHA HAZARD COMMUNICATION STANDARD STATUS:** Regulated.

**CERCLA REPORTABLE QUANTITY:** 10#'s

**SARA TITLE III STATUS:**

302 Extremely Hazardous Substance - NO

311/312 Hazard Categories - Immediate

313 Toxic Chemicals - Yes (Captan)

**CALIFORNIA PROP 65 STATUS:** Listed

## SECTION 16 - OTHER INFORMATION

**DISCLAIMER:** The information presented herein is based on available data from reliable sources and is correct to the best of Micro Flo's knowledge. Micro Flo makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

**REVISED DATE:** July 14, 1999

**REVISED FOR:** Addition of Poison Control Emergency Numbers

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