

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS:	EMERGENCY TELEPHONE NUMBERS:
MICRO FLO COMPANY LLC	(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)

PRODUCT NAME	: CAPTAN 80 WDG
CHEMICAL NAME	: N-(trichloromethylthio)cyclohex-4-ene-1,2-dicarboximide
CHEMICAL FAMILY	: phthalimide fungicide
PRODUCT CODE	: EPA Reg. No. 66222-58-51036

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Captan	78.2	133-06-2	5 mg/m ³	5 mg/m ³
Related Derivatives	1.8	N/A	N/A	N/A
Inert ingredients	20.0	N/A	N/A	N/A

SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

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

EMERGENCY OVERVIEW: Beige granule

- 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 - Causes irreversible eye damage. Do not get in eyes or on clothing
 SKIN - Harmful if absorbed through the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
 INHALATION - May be fatal if inhaled
 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 IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration,

preferably mouth-to-mouth if possible.

- Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT (method): Will not flash.

FLAMMABLE LIMITS (LFL-UFL): unknown

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. 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 CONTROLS, PERSONAL PROTECTION

Causes irreversible eye damage. Inform workers orally or 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 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 participating in dip treatments

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

RESPIRATOR - A NIOSH-approved respirator with any N, R, P, or HE filter must be worn by all handlers except (1) applicators driving motorized equipment, and (2) mixers/loaders/applicators participating in backpack, low pressure hand-wand/handgun, and dip treatments, and (3) mixers/loaders participating in aerial application operations must wear an air-purifying NIOSH-approved respirator with any N100, R100, or P100 filter.

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: beige granule.

ODOR: organic.

MOLECULAR WEIGHT (technical): 300.6

MOLECULAR FORMULA (technical): C₉H₈Cl₃NO₂S

BULK DENSITY: .70 g/mL @ 20 degrees C

pH: 5.0

VAPOR PRESSURE: 2.01 x 10⁻⁴ Pa at 50 degrees C

% VOLATILE: < 1%

WATER SOLUBILITY: insoluble

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 ₅₀ (rat)	-	> 2,000 mg/Kg
Dermal LD ₅₀ (rat)	-	> 5,000 mg/Kg
Inhalation LC ₅₀ (rat)	-	> 1.0 mg/L
Eye Irritation (rabbit)	-	Corrosive
Skin Irritation (rabbit)	-	mild

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 LC₅₀, Rainbow trout - unknown ug/L

96 hour LC₅₀, Bluegill - 0.07 ug/L

AVIAN TOXICITY: (Technical)

Oral LD₅₀, Bobwhite quail - > 2,000 mg/Kg

Oral LD₅₀, Mallard duck - > 2,000 mg/Kg

BEE TOXICITY: Non-toxic.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or Hazardous Waste representative at the nearest EPA Regional Office for guidance

CONTAINER: Refer to product label.

SECTION 14 - TRANSPORT INFORMATION

DOT SHIPPING DESCRIPTION: Environmentally Hazardous Substance, Solid, N.O.S., (Captan 80%), 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#

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: February 12, 2003

REVISED FOR: Initial

PREPARED BY: M. Talley