

## MATERIAL SAFETY DATA SHEET

### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**COMPANY ADDRESS:** ALBAUGH, INC.  
Ankeny, IA 50021

**EMERGENCY TELEPHONE NUMBERS:**  
(800) 424-9300 (CHEMTREC, transportation and spills)

**PRODUCT NAME:** CAPTAN 4L  
**CHEMICAL NAME:** Captan  
(N-Trichloromethylthio-4-cyclohexene-1,2-dicarboximide)

**CHEMICAL FAMILY:** Fungicide  
**PRODUCT CODE:** EPA Reg. No 42750-236

### SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Captan	38.75%	133-06-2	5.0 mg/m <sup>3</sup>	5.0 mg/m <sup>3</sup>

### SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

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

**HEALTH HAZARDS:** Severe eye irritant.

**PHYSICAL HAZARDS:** May release toxic fumes if burned.

**ENVIRONMENTAL HAZARDS:** Captan is toxic to aquatic organisms.

### SECTION 4 - FIRST AID MEASURES

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15 to 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 person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**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.

**NOTE TO PHYSICIAN:** No specific antidote. Treat symptomatically.

Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

### 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. Dust could potentially form explosive mixture in air. Avoid dust formation.

**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. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Dike and collect water used to fight fire to prevent environmental damage due to run off.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece.

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

### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Clean up spills immediately, observing precautions 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:** Avoid creating dust cloud. Vacuum or sweep up material and place in a container for reuse or disposal. Reduce airborne dust and prevent scattering by moistening with water. Pick up wash liquid with additional absorbent and place in a disposable container. After removal, flush contaminated area thoroughly with water.

Wear appropriate personal protection equipment. (See Section 8 Exposure Controls, Personal Protection.)

### **SECTION 7 - HANDLING AND STORAGE**

KEEP OUT OF REACH OF CHILDREN!

**HANDLING:** Use only in a well-ventilated area. Wear appropriate safety equipment when handling.

**STORAGE:** Store in cool, dry well ventilated area. Store in original container. Do not expose water soluble packets to water or high moisture conditions. Keep away from food, feed and drinking water.

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

**EXPOSURE LIMITS (8 hour TWA, ppm):** 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. Local mechanical exhaust ventilation may be required. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**PERSONAL PROTECTIVE EQUIPMENT:** All mixers, loaders, applicators, and other handlers (including handlers participating in seeding and transplanting as part of root-dip or greenhouse-soil treatments) must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear
- 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 > 14 mils
- Chemical-resistant apron when participating in dip treatments
- In addition, 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 applications. 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:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash 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 viscous liquid  
**ODOR:** Slight musty odor  
**BULK DENSITY:** 1.2 - 1.3 g/ml  
**pH:** 6.0 - 7.0  
**VAPOR PRESSURE (tech):** unknown  
**WATER SOLUBILITY:** Dispersible

### **SECTION 10 - STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** Stable, however may decompose if heated.  
**CONDITIONS TO AVOID:** Avoid temperatures above (115°F, 46°C) and high moisture.  
**INCOMPATIBILITY WITH OTHER MATERIALS:** Acidic and oxidizing materials  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of nitrogen and 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)	-	> 0.9 mg/L (4 hour)
Eye Irritation (rabbit)	-	Severe, corrosive
Skin Irritation (rabbit)	-	Moderate
Sensitization (guinea pig)	-	Potential sensitizer

#### **CARCINOGEN STATUS:**

OSHA - No  
 NTP - No  
 IARC - Group 3

**MUTAGENIC DATA:** Preponderance of evidence indicates that captan is non-mutagenic

### **SECTION 12 - ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** This pesticide is toxic to fish. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

#### **FISH TOXICITY: (technical)**

96 hour LC<sub>50</sub>, Rainbow trout – unknown  
 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/Kg

**BEE TOXICITY: (technical)** Non-toxic

### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE DISPOSAL:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### **SECTION 14 - TRANSPORT INFORMATION**

**DOT SHIPPING DESCRIPTION:** UN 3082, Environmentally Hazardous Substance, Liquid, N.O.S., 9, UN 3082, PG III, RQ (captan)

**DOT HAZARD CLASS:** 9

**UN NUMBER:** 3082

**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**

**CERCLA REPORTABLE QUANTITY:** 10 lbs

**SARA TITLE III STATUS:**  
 311/312 Hazard Categories – Immediate and Delayed Health  
 313 Toxic Chemicals – Yes (captan)

**CALIFORNIA PROP 65:** Listed

### **SECTION 16 - OTHER INFORMATION**

HMIS HAZARD RATINGS	HEALTH	3
	FLAMMABILITY	0
	PHYSICAL HAZARD	1
	4=Severe   3=Serious   2=Moderate   1=Slight   0=Minimal	

**DISCLAIMER:** The information presented herein is based on available data from reliable sources and is correct to the best of Albaugh's knowledge. Albaugh 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.

**REVISED DATE:** June, 2012

**REFERENCE:** Correct UN number in Section 14