

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

**COMPANY ADDRESS:** ALBAUGH, LLC  
Ankeny, IA 50021

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

**PRODUCT NAME :** CAPTAN 4L  
**CHEMICAL NAME :** Captan  
**PRODUCT USE :** Fungicide  
**PRODUCT CODE :** EPA Reg. No 42750-236

**SECTION 2 - HAZARDS IDENTIFICATION SUMMARY**

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

Off-white viscous liquid

**HEALTH HAZARDS: DANGER.** Corrosive. Causes irreversible eye damage if not treated promptly. Harmful if swallowed.**PHYSICAL HAZARDS:** Can decompose at high temperatures forming toxic gases.**ENVIRONMENTAL HAZARDS:**  
Highly toxic to fish.**SECTION 3 - COMPOSITION, INFORMATION OF INGREDIENTS**

| COMPONENT         | PERCENTAGE | CAS NUMBER |
|-------------------|------------|------------|
| Captan            | 38.75      | 133-06-2   |
| Inert ingredients | 61.25      | n/a        |

**SECTION 4 - FIRST AID MEASURES**

First Aid responders should use protective equipment in Section 8 if there is a potential for exposure to product.

**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 the poison control center or doctor. Do not give anything by mouth to an unconscious 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.

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**

National Fire Protection Rating (NFPA)

|  |   |
|--|---|
| HEALTH   | 2 |
| FLAMMABILITY                                     | 0 |
| REACTIVITY                                       | 1 |
| 4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal |   |

**FLASHPOINT:** Will not flash.

**EXTINGUISHING MEDIA:** Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

**FIRE AND EXPLOSION HAZARD:** Can burn in fire, releasing irritating and toxic gases such as hydrogen chloride, hydrogen cyanide, oxides of nitrogen, carbon monoxide. Dust could potentially form explosive mixture in air. Avoid dust formation.

**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.

Minimize use of water to prevent environmental contamination

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**IN CASE OF SPILLS OR LEAKS:** Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**SMALL SPILL:** Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

**LARGE SPILL:** Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal.

Minimize use of water to prevent environmental contamination. Contact your State Pesticide or Environmental Control Agency, or nearest EPA Regional Office for guidance on disposal.

**SECTION 7 - HANDLING AND STORAGE**

KEEP OUT OF REACH OF CHILDREN!

**HANDLING:** Use only in a well-ventilated area. Wear proper safety equipment specified in Section 8 when mixing, loading or otherwise handling concentrate.

**STORAGE:** Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from any heat or ignition source. Avoid storage at high temperatures. Do not stack over two pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies food feed and fertilizer to avoid contamination. Avoid contamination with acids and alkalis. Store in original containers only.

**SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION****EXPOSURE LIMITS (8 hour TWA):**

| COMPONENT | OSHA PEL   | ACIGH TLV           |
|-----------|------------|---------------------|
| Captan    | Not listed | 5 mg/m <sup>3</sup> |

**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**

|                                   |  |
|-----------------------------------|--|
| <b>Appearance:</b>                | Off-white viscous liquid                             |
| <b>Odor:</b>                      | Faint odor   |
| <b>pH:</b>                        | 6.7 – 7.7  |
| <b>Melting Point:</b>             | Not applicable                                       |
| <b>Boiling Point:</b>             | No data  |
| <b>Flash Point:</b>               | Will not flash                                       |
| <b>Evaporation Rate:</b>          | No data  |
| <b>Flammability:</b>              | Not flammable  |
| <b>Flammability Limits:</b>       | Not applicable                                       |
| <b>Vapor Pressure:</b>            | 0 mmHg at 24 C                                       |
| <b>Vapor Density:</b>             | Not applicable                                       |
| <b>Density:</b>                   | 1.15 – 1.21 g/ml (9.60 – 10.10 lb/gal)*              |
| <b>Solubility:</b>                | Emulsifies   |
| <b>Partition Coefficient:</b>     | No data  |
| <b>Auto-ignition Temperature:</b> | No data  |
| <b>Decomposition Temperature:</b> | No data  |
| <b>Viscosity:</b>                 | 238.9 centistokes at 20°C; 121.5 centistokes at 40°C |

\*Listed density is an approximate value and does not necessarily represent that of a specific batch.

**SECTION 10 - STABILITY AND REACTIVITY**

**PRODUCT REACTIVITY:** Non-reactive

**CHEMICAL STABILITY:** Stable, however may decompose if heated.

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

**CONDITIONS TO AVOID:** Avoid temperatures below 25°F or above 115°F

**INCOMPATIBLE MATERIALS:** Acidic and oxidizing materials

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of nitrogen and carbon

**SECTION 11 - TOXICOLOGICAL INFORMATION**

Results from tests performed on similar formulations.

**ACUTE TOXICITY:**

|                                   |                      |
|-----------------------------------|----------------------|
| Oral LD <sub>50</sub> (rat)       | > 2,000 mg/Kg        |
| Dermal LD <sub>50</sub> (rat)     | > 2,000 mg/Kg        |
| Inhalation LC <sub>50</sub> (rat) | > 0.5 mg/L           |
| Eye Irritation (rabbit)           | Corrosive            |
| Skin Irritation (rabbit)          | Slight               |
| Sensitization (guinea pig)        | Potential sensitizer |

**CARCINOGEN STATUS:**

|      |            |
|------|------------|
| OSHA | Not listed |
| NTP  | Not listed |
| IARC | Group 3    |

**TERATOGENICITY:** Studies have been inconclusive.

**MUTAGENICITY:** Weight 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.

**FATE:** Relatively non-mobile in soil with a half life of 1 - 10 days depending on soil type.  
Half life in water is < 1 day.

**FISH TOXICITY:** (technical)

|  |        |
|--|--------|
| 96 hour LC <sub>50</sub> , Rainbow trout – | 35 ppb |
| 96 hour LC <sub>50</sub> , Bluegill –      | 75 ppb |

**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:** (technical) - > 10 ug/bee

**SECTION 13 - DISPOSAL CONSIDERATIONS**

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

**PESTICIDE DISPOSAL:** 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 of the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER 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.

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller

Refer to the product label for additional and complete Container Handling instructions

**SECTION 14 - TRANSPORT INFORMATION**

|                                  |  |
|----------------------------------|--|
| <b>DOT SHIPPING DESCRIPTION:</b> | UN 3082, Environmentally Hazardous Substance, Liquid, N.O.S., 9, PG III, RQ (captan) |
| <b>TRANSPORT HAZARD CLASS:</b>   | 9  |
| <b>UN NUMBER:</b>                | 3082   |
| <b>DOT PACKING GROUP:</b>        | III  |

**SECTION 15 - REGULATORY INFORMATION**

|                                    |  |
|------------------------------------|--|
| <b>CERCLA REPORTABLE QUANTITY:</b> | 10 lbs (2.5 gallons of product)  |
| <b>SARA TITLE III STATUS:</b>      |  |
| 311/312 Hazard Categories –        | Immediate and Delayed Health   |
| 313 Toxic Chemicals –              | Yes (captan)   |
| <b>CALIFORNIA PROP 65:</b>         | Listed   |
| <b>TSCA:</b>                       | This product is exempted from TSCA because it is solely for FIFRA regulated use. |

**SECTION 16 - OTHER INFORMATION**

|                           |  |   |
|---------------------------|--|---|
| HMIS<br>HAZARD<br>RATINGS | HEALTH   | 2 |
|                           | 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.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling.

It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

**REVISED DATE:** September, 2014

**REFERENCE:** Upgrade for GHS compliance