SAFETY DATA SHEET

DREXEL CAPTAN 4 FLOWABLE SEED PROTECTANT

Section 1: Material Identification

Product Name: Drexel Captan 4 Flowable Seed Protectant

EPA Reg No.: 19713-645

CAS NO: 133-06-2

Formula: $C_9H_8Cl_3NO_2S$

Company: Drexel Chemical Company
1700 Channel Avenue
Memphis, TN 38106

Synonyms: Captan

Identifiers:

EINECS: 205-087-0
RTECS: GW5075000
DOT label: See Section 14 Transport Information

Emergency Telephone Number:

CHEMTREC	Drexel Chemical Co.
Tel: 1-800-424-9300	901-774-4370

This product is an EPA FIFRA registered pesticide. Some of the classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see **Section 15: REGULATORY INFORMATION** for explanation.

Section 2: Hazard Identification
(As defined by the OSHA Hazard Communication Standard, 29)

GHS classification:

Health Hazards:	Acute inhalation	Category 4
	Eye damage/irritation	Category 1
	Skin corrosion/irritation	Category 2
Environmental Hazard:	Aquatic acute toxicity	Category 1

GHS label elements:

Signal Word: Danger

Hazard Statements:

Harmful if inhaled.
Causes serious eye damage.
Causes skin irritation.
Very toxic to aquatic life.

Precautionary Statements:

Prevention:

Avoid breathing mist or vapors. Use only outdoors or in well-ventilated area.
Wear eye protection/face protection.
Wash exposed skin thoroughly after handling. Wear protective gloves.
Avoid release to the environment.

Response:

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison control center or doctor.
If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention/advice. Take off contaminated clothing and wash before reuse.
Collect spillage.

Storage:

Store in a cool, dry, well ventilated and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.

Disposal:

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities.

Section 3: Composition Information

Components	CAS No.:	% By Wt.:	OSHA PEL:	ACGIH TLV:
Active Ingredient:				
Captan	133-06-2	38.5%	N/Av	5 mg/m^3
Inert Ingredients:	N/A	61.5%	N/A	N/A

Section 4: First-Aid Measures

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

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. Rinse out mouth with water. 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 or convulsing 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: Probable mucosal damage may contradict the use of gastric lavage.

Section 5: Fire Fighting Measures

Fire Hazards: Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Thermal decomposition during a fire can produce toxic fumes and irritating gases.

Flammability classification (OSHA 29 CFR 1910.1200): Non-combustible
Flash point: >200°F
Lower flammable limit (% by volume): N/Av
Upper flammable limit (% by volume): N/Av

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Evacuate the area and fight the fire from upwind at a safe distance to avoid hazardous vapors or decomposition products. Dike and collect fire-extinguishing water to prevent environmental damage and excessive waste runoff.

Firefighting media: Use foam, dry chemical, carbon dioxide, or water fog when fighting fires involving this product. Do not use water jet, as this may spread burning material. Minimize the use of water to avoid environmental contamination. Contain all runoff.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Use full face shield and operate in positive pressure mode. Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Hazardous Combustion Products: Carbon oxides, Sulphur oxides, nitrogen oxides, halogenated compounds, irritating fumes and smoke.

NFPA:	**Health:**	**Flammability:**	**Reactivity:**
	2	**0**	**0**

(Rating: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Insignificant)

Section 6: Accidental Release Measures

Steps to be taken if Material is Released or Spilled:

- Contain spilled material if possible. Small spills: Sweep up with suitable absorbent material. Collect in suitable and properly labeled containers. Large spills: Contact Drexel Chemical Co. for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Personal Precautions:

- Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Section 7: Handling and Storage

KEEP OUT OF REACH OF CHILDREN

Handling: **General Handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Wear chemical protective equipment when handling. Keep away from heat, sparks and flame. See Section 8, Exposure Controls and Personal Protection.

Storage: Store in a cool, dry, ventilated and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.

Section 8: Exposure Controls / Personal Protection

Exposure Limits: TLV: Captan 5 mg/m^3

Personal Protection:

Eye/Face Protection: Wear safety glasses with side shields or chemical splash goggles to prevent vapors or mists from entering the eyes. If using a full face shield, always use safety glasses or goggles along with the face shield to ensure adequate protection of the eyes.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber (“nitrile” or “NBR”) or Polyvinyl chloride (“PVC” or “vinyl”).

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. When handling in enclosed areas, when large quantities of mists are generated or prolonged exposure is possible in excess of the TLV, use a respirator with either an organic vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating. Avoid getting wash water in eyes.

Engineering Controls:

Ventilation: When handling this product proper ventilation is required to maintain exposure below the TLV. Ventilate all transport vehicles prior to unloading. Facilities storing or utilizing this material should be equipped with and eyewash facility and safety shower.

Section 9: Physical and Chemical Properties

Physical State:	Viscous liquid
Color:	Tan
Odor:	Mild
Flash Point:	>200°F (Non-combustible)
Vapor Pressure (mmHg):	N/A
Boiling Point:	>212°F
Vapor Density (air = 1):	N/Av
Bulk Density (H_2O = 1):	1.24 g/cc
Freezing Point:	N/Av
Solubility in water (wt. %):	Dispersible
pH:	4-5 (5% emulsion 20°C)
Viscosity:	1200-1500 cp (@ 20°C)

Section 10: Stability and Reactivity

Stability/Instability: Thermally stable at typical use temperatures and in closed containers.

Conditions to Avoid: Avoid heat of open flame. Avoid high temperatures above 130°F (54.4°C).

Incompatible Materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

Hazardous Polymerization: Will not occur

Thermal Decomposition: Decomposition products can include and are not limited to: Carbon oxides, sulfur oxides, nitrogen oxides, and halogenated compounds.

Section 11: Toxicological Information

Acute Toxicity:

Ingestion:

- LD50, (rat): >4,000 mg/kg

Dermal:

- LD50, (rabbit) >2,010 mg/kg

Inhalation:
- LC50,(4h), (rat): 1.5 – 2.33 mg/L

Eye Irritation (rabbit):
- Category I for non-washed eyes – Corrosive (irreversible destruction of ocular tissue) or corneal involvement or conjunctival irritation persisting through day 21.
- Category III for washed eyes – Corneal involvement or conjunctival irritation clearing in 7 days or less.

Skin Irritation (rabbit):
- Slightly irritating

Sensitization Skin (Guinea Pig):
- Non-sensitizer

Chronic Toxicity and Carcinogenicity:
- EPA lists as likely carcinogenic at high-level exposures but not likely at dose levels that do not cause cytotoxicity and regenerative cell hyperplasia. Not listed as carcinogenic by IARC, NTP or OSHA.

Teratogenicity, mutagenicity, and other reproductive effects: Not likely to cause reproductive effects in humans.

Section 12: Ecological Information

The information provided here is for the a.i. Captan.

ENVIRONMENTAL FATE:
- This product is acutely toxic to freshwater fish, practically non-toxic to birds and non-toxic to bees when used as directed.

Persistence and Degradability:
- Dissipates rapidly in the environment, is slightly-to-relatively immobile in soils.

Aquatic Toxicity:
- Rainbow Trout: LC50: (73.2 µg/L)
- Bluegill Sunfish: LC50: (72 µg/L)
- Daphnia magna: 48 hour, EC50: (7 – 10 mg/L)

Bees:
- Acute LD50: 46.26 µg/bee

Bird Toxicity:
- Mallard Duck: LD50: 2000 mg/kg
- Bobwhite Quail: LD50: >2150 mg/kg

Section 13: Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Section 14: Transport Information

DOT: UN-3082, Environmentally hazardous substances, liquid, n.o.s., (Captan), 9, PG-III, RQ 10 lbs.

ICAO/IATA: UN-3082, Environmentally hazardous substances, liquid, n.o.s., (Captan), 9, PG-III, RQ 10 lbs.

IMDG: UN-3082, Environmentally hazardous substances, liquid, n.o.s., (Captan), 9, PG-III, RQ 10 lbs., Marine Pollutant

Freight Description: Agricultural Fungicide, liquid, n.o.s.

ERG Guide No.: 171

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: Regulatory Information

OSHA Hazard Communication Standard:

- **This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.**

EPA FIFRA INFORMATION

- **This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemical. The hazard information required on the pesticide label is listed out below. The pesticide label also includes other important information, including directions for use.**
- **EPA Label Human Hazards Statements: DANGER: Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin or inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals.**

EPA/CERCLA Reportable Quantity: 10 Lbs. (2.5 gal of product)

SARA/TITLE III:

- **Sec. 302. Extremely Hazardous Substance Notification:** This material is not known to contain any Extremely Hazardous Substances.
- **Sec. 311/312. Hazard Categories**: Immediate health hazard
- **Sec. 313. Toxic Chemical(s):** Captan (CAS 133-06-2)
- **RCRA Waste Code:** Not applicable

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

- Captan is listed.

Toxic Substances Control Act (TSCA):

- All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

Section 16: Other Information

Drexel Chemical Company recommends that each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

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