


**SAFETY DATA SHEET****DREXEL DREXALIN™ PLUS PLANT GROWTH REGULATOR****Section 1: Material Identification****Product Name:** Drexel Drexalin™ Plus Plant Growth Regulator**EPA Reg No.:** 19713-510**CAS NO:** 62924-70-3**Formula:** $C_{16}H_{12}ClF_4N_3O_4$ **Company:** Drexel Chemical Company
1700 Channel Avenue
Memphis, TN 38106**Synonyms:** Flumetralin**Identifiers:****EINECS:** 2001-001-0**RTECS:** DA4391600**DOT information:** See Section 14 for Transportation Information**Emergency Telephone Number:**CHEMTREC
Tel: 1-800-424-9300Drexel Chemical Co.
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 Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide.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 toxicity/inhalation	Category 4
Eye damage/irritation	Category 2B
Skin corrosion/irritation	Category 2
Aspiration hazard	Category 1
Skin sensitizer	Category 1B
Carcinogenicity	Category 2
Specific target organ toxicity – repeated exposure	Category 2

	Specific target organ toxicity – single exposure	Category 3
	Specific target organ toxicity – single exposure	Category 3
Environmental hazards:	Aquatic acute toxicity	Category 1
	Aquatic toxicity long term	Category 2
Physical hazards:	Flammable liquid and vapor	Category 4
GHS label elements:		
Signal word:	Danger	
		
Hazard statements:	<p>Harmful if inhaled.</p> <p>Causes eye irritation.</p> <p>Causes skin irritation.</p> <p>May be fatal if swallowed and enters airways.</p> <p>May cause allergic skin reaction.</p> <p>Suspected of causing cancer.</p> <p>May cause damage to blood, liver, spleen through prolonged or repeated exposure.</p> <p>May cause respiratory irritation.</p> <p>May cause drowsiness or dizziness.</p> <p>Very toxic to aquatic life.</p> <p>Toxic to aquatic life with long lasting effects.</p> <p>Combustible liquid.</p>	
Precautionary statements:		
Prevention:	<p>Do not breathe dust/fume/gas/mist/vapors/spray.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Wear protective gloves, protective clothing, eye protection, face protection.</p> <p>Keep away from flames and hot surfaces.</p> <p>No smoking.</p> <p>Wash exposed skin thoroughly after handling.</p> <p>Use only outdoors or in a well-ventilated area.</p> <p>Contaminated work clothing must not be allowed out of the workplace.</p> <p>Avoid release to the environment.</p>	
Response:	<p>If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.</p> <p>If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.</p>	

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.

If exposed or concerned: Get medical advice/attention. Get medical advice if you feel unwell.

In case of fire: Use foam, dry chemical, carbon dioxide, or water fog to extinguish.

Collect spillage.

Storage: Store locked up in a well-ventilated place.
Keep container closed.
Keep cool.

Disposal: Dispose of contents and container in accordance with local regulations.

Section 3: Composition Information

<u>Components</u>	<u>CAS No.:</u>	<u>% By Wt.:</u>	<u>OSHA PEL:</u>	<u>ACGIH TLV:</u>
Active ingredient:				
Flumetralin	62924-70-3	13.7%	N/Av	5 mg/m ³
Inert ingredients:	N/A	86.3%	N/A	N/A

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 eyes. Obtain medical attention without delay, preferably from an ophthalmologist.

If Swallowed: IMMEDIATELY call a poison control center for treatment advice. DO NOT induce vomiting unless told to do so by the poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Have product label with you when calling a poison control center or doctor.

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: There is no specific antidote, treat symptomatically. Probable mucosal damage may contradict gastric lavage. Contains petroleum distillate - vomiting may cause aspiration pneumonia.

Section 5: Fire Fighting Measures

Fire Hazards: Combustible liquid and vapor. Will ignite when exposed to heat, flame and other sources of ignition. Vapors can travel to a source of ignition and flash back causing an explosive and fire. 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 fumes and irritating gases.

Flammability classification (OSHA 29 CFR 1910.1200): Combustible

Flash point: 172°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 fire-fighting 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 fire-fighting 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, nitrogen oxides, halogenated compounds, irritating fumes and smoke.

NFPA: Health: Flammability: Reactivity:

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(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: Apply suitable absorbent then sweep up. 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 after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Wear coveralls over short-sleeved shirt and short pants, chemical resistant footwear plus socks, chemical resistant apron 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 Flumetralin 5mg/m³

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.

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:	Liquid
Color:	Reddish orange
Odor:	Solvent
Flash Point:	172°F
Vapor Pressure (mmHg):	N/Av
Boiling Point:	>200°F
Vapor Density (air = 1):	N/Av
Bulk Density (H₂O = 1):	1.02 g/cc (8.29 Lbs. / gal.)

Freezing Point: 20°F
Solubility in water (wt. % - weight): Emulsifies
pH: 4-7 (5% emulsion at 23°C)
Viscosity: 5.85 cP (@ 23°C)

Section 10: Stability and Reactivity

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

Conditions to Avoid: Avoid heat or open flame and ignition sources. Avoid high temperatures above 130°F (54.4°C).

Incompatible Materials: Avoid contact with: Strong oxidizers. Mildly corrosive to steel and tin plate.

Hazardous Polymerization: Will not occur

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

Section 11: Toxicological Information

Data presented for Flumetralin technical:

Acute Toxicity:

Ingestion:

- LD50, (rat): >5,000 mg/kg

Dermal:

- LD50, (rat): >2,000 mg/kg

Inhalation:

- LC50, (4h), Aerosol, (rat): >1.55 mg/l

Eye Irritation (rabbit):

- Moderate irritation

Skin Irritation (rabbit):

- Slight to mild

Sensitization Skin:

- Non-sensitizer (Guinea Pigs)

Chronic/Subchronic Toxicity:

- Liver, blood and spleen toxicity occurred at the highest dose level (dogs). Effects on liver (rats).

Carcinogenicity:

- Not expected to be carcinogenic in humans.

Teratogenicity, mutagenicity, and other reproductive effects: None known

Section 12: Ecological Information

Ecotoxicological data based on the active ingredient Flumetralin:

ENVIRONMENTAL FATE:

- Very highly toxic to fish, daphnids and other aquatic organisms. Practically nontoxic to birds and bees.

Persistence and Degradability:

- Very persistent in aerobic soils, some potential to leach to groundwater.

Aquatic Toxicity:

- Rainbow Trout, 96 hour, LC50: > 3.2 ppb
- Bluegill, 96 hour, LC50: 23 µg/L
- Daphnia magna, 48 hour, EC50: 2.8 ppb

Arthropod Toxicity:

- Bees, 48h, EC50: >100 µg/bee

Bird Toxicity:

- Mallard Duck, 14-day, LC50: 4,800 mg/kg
- Bobwhite Quail, 21-day, LD50: > 2,150 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: Non-regulated

IMDG: UN 3082, Environmentally hazardous substance, liquid, N.O.S.(Flumetralin), 9, PG-III, Marine Pollutant

ICAO/IATA: UN 3082, Environmentally hazardous substance, liquid, N.O.S., (Flumetralin), 9, PG-III

Freight Description: Plant growth regulator, 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/CERCLA Reportable Quantity:** None
- **Hazard statements on EPA label:** CAUTION: Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

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:** Fire Hazard; Immediate health hazard; Chronic health hazard
- **Sec. 313. Toxic Chemical(s):** None
- **RCRA Waste Code:** None

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

- This product is not 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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