

DREXEL FOMESAFEN TECHNICAL

SECTION 1: MATERIAL IDENTIFICATION

Product Name:	Drexel Fomesafen Technical	
EPA Reg. No.:	19713-656	
Product Usage:	For manufacturing use	
Manufacturer:	Drexel Chemical Company	
Address:	1700 Channel Avenue PO Box 13327 Memphis, Tennessee, 38113-0327, USA 901-774-4370	
Emergency Telephone Numbers:	CHEMTREC DREXEL CHEMICAL COMPANY	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 Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Refer to SECTION 15: REGULATORY INFORMATION for explanation.

SECTION 2: HAZARD(S) IDENTIFICATION

(As defined by the OSHA Hazard Communication Standard, 29)

Signal Word:

DANGER



Classifications:

Hazard Class:	<u>Toxicity Study:</u>	<u>Category:</u>
	Acute Toxicity, Oral	Category 5
	Acute Toxicity, Dermal	Category 5
	Acute Toxicity, Inhalation	Category 4
	Serious eye damage / irritation	Category 1
	Skin corrosion/ irritation	Category 2
	Skin sensitizer	Category 1B

Hazard Statements:

<u>H Code:</u>	<u>Statement:</u>
H303	May be harmful if swallowed
H313	May be harmful in contact with skin
H332	Harmful if inhaled
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Cause serious eye damage

HNOC (Hazard not otherwise classified): None available / Not applicable

Prevention:

Precautionary Statements: **Statement:**

If medical advice is needed, have product container or label at hand.
 Keep out of reach of children.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Avoid breathing dust/fume/gas/mist/vapors/spray.

Do not get in eyes, on skin, or on clothing.
 Wash face, hands and any exposed skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Avoid release into the environment.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Use personal protective equipment as required.
 In case of inadequate ventilation, wear respiratory protection.

Response:

If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Get immediate medical advice/attention.
If Swallowed: Call a POISON CENTER or doctor/physician if you feel unwell. Treat symptomatically.
If Inhaled: Remove person to fresh air and keep comfortable for breathing. Call POISON CENTER or doctor if you feel unwell.
If on Skin or Clothing: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
If exposed or concerned: None available, get medical attention.
Material released or spilled: Collect spillage

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in a cool, dry, and secure area designated specifically for pesticides and away from heat sources. Always use oldest stock first.

Disposal: Dispose of contents/container in accordance with your local or area regulatory authorities.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name:</u>	<u>Synonym:</u>	<u>CAS No.:</u>	<u>EC No.:</u>	<u>RTECS:</u>	<u>% By Wt.:</u>
Active Ingredient:					
Fomesafen*	5-[2-chloro-4-(trifluoromethyl) phenoxy]-N-(methylsulfonyl)-2-nitrobenzamide	72178-02-0	276-439-9	CV2475000	98.6 %
Inert Ingredients:					
	N/A	N/A	N/A	N/A	1.4 %
* 5-[2-chloro-4-(trifluoromethyl) phenoxy]-N-(methylsulfonyl)-2-nitrobenzamide					

SECTION 4: FIRST-AID MEASURES

Have the product container, label and / or Safety Data Sheets (SDS) with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency medical treatment information.

Eye Contact: 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.

Skin/Clothing Contact: 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.

Indication of Medical Attention and Special Treatment Needed: None / Treat symptomatically.
If medical advice is needed, have product container or label at hand.

Note to Physician / Important Symptoms/ Effects, Acute and or Delayed: None known

SECTION 5: FIRE FIGHTING MEASURES

Fire Fighting Media: Dry chemical, CO₂, Foam, Water mist. Do not use water jet, as this may spread burning material. Minimize the use of water to avoid environmental contamination. Contain all runoff.


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. Cool closed containers exposed to fire with water spray, if possible. Dike and collect fire-extinguishing water to prevent environmental damage and excessive waste runoff. Contact your State Pesticide or Environmental Control Agency, or nearest EPA Regional Office for guidance on disposal.

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.

Specific Fire Hazards: Flammability classification (OSHA 29 CFR 1910.1200): N/A
Flash point: NA
Lower flammable limit (% by volume): N/A
Upper flammable limit (% by volume): N/A

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

National Fire Protection Association:

NFPA:	Health	Fire	Reactivity
	1	0	0

Ratings: **4-Extreme** **3-High** **2-Moderate** **1-Slight** **0-Insignificant**

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to SECTION 7: HANDLING AND STORAGE, for additional precautionary measures. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION.

Environmental Precautions:

Do not flush into surface water or sanitary sewer system. Prevent from entering soil, ditches, sewers, waterways and/or groundwater. Refer to SECTION 12: ECOLOGICAL INFORMATION.

Steps to be taken if Material is Released or Spilled:

Control the spill at its source.

Small spills: Stop the flow of material, if this is without risk. Apply suitable absorbent and sweep up. Collect in suitable and properly labeled containers. Should be damped-off and pumped into containers. Soak up remainder with absorbent material and dispose of in accordance with local regulations. Prevent entry into waterways, sewers, basements or confined areas.

Large spills: Stop the flow of material, if this is without risk. Apply suitable absorbent and sweep up. Collect in suitable and properly labeled containers. Should be damped-off and pumped into containers. Soak up remainder with absorbent material and dispose of in accordance with local regulations. Prevent entry into waterways, sewers, basements or confined areas. Contact Drexel Chemical Company for clean-up assistance. Refer to SECTION 13: DISPOSAL CONSIDERATIONS, for additional information. Prevent entry into waterways, sewers, basements or confined areas.

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 dust. Avoid breathing vapors. Do not eat, drink or smoke when using this product. Use with adequate ventilation. Wear chemical protective equipment when handling. Wear long-sleeved shirt, long pants and shoes with socks when handling. Keep away from heat, sparks and flame. Do not reuse this container. Refer to SECTION 8: EXPOSURE CONTROLS / 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. Keep away from unauthorized access. Do not store below 0°C temperature. Do not store near children, food, foodstuffs, drugs or potable water supplies. Always use oldest stock first.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Components:	OSHA PEL	ACGIH TLV	OTHER
Fomesafen	2 mg/m ³ TWA (8-hr TWA)	N/A	N/A

THIS SECTION IS FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD REFER TO THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Engineering Controls:

Ventilation: Investigate engineering techniques to reduce exposures. 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 an eyewash facility / station and safety shower. Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Personal Protection:

Eye/Face Protection: Eye contact should be avoided through the use of chemical safety glasses, goggles, or a face shield selected in regard to exposure potential. Wear chemical splash goggles to prevent vapors or mists from entering the eyes. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.

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

Hand	Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include:
Protection:	Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Viton, Polyvinyl chloride ("PVC" or "vinyl"). The selection of gloves for a particular application and duration of use in the workplace should also be taken into account all relevant workplace factors such as, but not limited to: other chemicals which may be handled, physical requirements (cut/ puncture protection, dexterity, thermal protection), potential body reactions to gloves materials, as well as the instructions / specs provided by the supplier of gloves.
Skin	Use protective clothing chemically resistant to this material. Selection of specific items such as face shield,
Protection:	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.
Respiratory	Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements
Protection:	or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. When handling in enclosed areas, when large quantities of dusts are generated or prolonged exposure is possible in excess of the TLV, use a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Reported Value
Physical State	Powder
Appearance / Color	Off-White
Odor	No data available
Odor threshold	No data available
pH	3.0 – 4.0
Melting point	218 - 221°C
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability	No data available
Lower flammability/explosive limits (LEL)	No data available
Upper flammability/explosive limits (UEL)	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	0.857 g/ mL
Solubility in water	50 g / mL
Solubility in organic solvents	No data available
Partition coefficient (n-octanol/water)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Dissociation Constant	No data available
% Volatiles	No data available
Molecular Weight	438.76
Specific gravity	Not applicable

Property Note: The physical properties and reported values are typical values based on materials tested but may vary from sample to sample. Thus, typical values should not be construed as a guaranteed analysis of any specific lot/ batch or specification items.



Reactivity:	Thermally stable at typical use temperatures and in closed containers
Chemical Stability:	Stable under recommended storage conditions
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Avoid heat of open flame. Avoid temperatures above 130°F (54.4°C).
Incompatible Materials:	Strong acids. Strong bases. Strong oxidizers.
Hazardous Decomposition Products:	Decomposition products can include and are not limited to: Carbon oxides, sulfur oxides, nitrogen oxides, ammonia and halogenated compounds.

ACUTE TOXICITY

The information presented below is for the active ingredient.

Acute Oral:	LD ₅₀ (Rat):	>2,000 mg/kg
Acute Dermal:	LD ₅₀ (Rat):	>2,000 mg/kg
Acute Inhalation:	LC ₅₀ (Rat):	>3.87 mg/L
Eye Irritation:	(Rabbit):	Mildly irritating
Skin Irritation:	(Rabbit):	Non-irritant
Skin Sensitization:	(Guinea Pig):	A moderate skin sensitizer in animal tests

Carcinogenicity: Increased rates of malignant liver tumors in a 2-year mouse feeding study (1000ppm), but the results are not considered relevant to man.

IARC	Not listed
ACGIH	Not listed
NTP	Not listed
OSHA	Not listed

Developmental Toxicity:	No data available
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Specific target organ toxicity- repeated exposure: No data available / Not classified

ENVIRONMENTAL FATE

The information presented below is for the active ingredient. This product is slightly toxic to birds, fish, aquatic invertebrates and bees. This product may be toxic to non-target terrestrial plant species, primarily dicots. It is non-toxic to aquatic plants.

ECO-ACUTE TOXICITY

Aquatic Toxicity:	Rainbow Trout, LC₅₀	96 hour	680 mg/L
	Bluegill Sunfish, LC₅₀	96 hour	1,500 ppm
	Daphnia magna, LC₅₀	48 hour	294 ppm
Arthropod Toxicity:	Bees, Acute LD₅₀		100 µg
Bird Toxicity:	Mallard Duck, LD₅₀		This product is slightly toxic to birds
	Bobwhite Quail, LD₅₀		This product is slightly toxic to birds
Algal Toxicity:	Algae, LC₅₀	96 hour	This product may be toxic to non-target terrestrial plant species, primarily dicots. It is non-toxic to aquatic plants.
Soil Organism Toxicity:	Earthworm acute toxicity		No data available
Persistence and degradability:	Fomesafen is persistent in soil and aquatic environments (half-life in soils is from 63-525 days and in water from 49- 290 days). It degrades rapidly under anaerobic conditions (half-life is less than 20 days).		
Bioaccumulation:	Studies indicate that Fomesafen has a very low potential for bioaccumulation.		
Mobility in soil:	Fomesafen is mobile in soil and has a potential to move into groundwater and to be transported off-site via runoff into surface waters.		
Other adverse effects:	Do not contaminate water supplies, lakes, streams, ponds or drains with this product.		

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:	Not Regulated per 49 CFR 172.101
IMDG:	Not Regulated
ICOA / IATA:	UN 3077 Environmentally hazardous substance solid, n.o.s. (Fomesafen), 9, III
Freight Description:	Agricultural herbicide, Solid, 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 contains hazardous components as defined under the criteria of the Federal OSHA Hazardous Communication Standard 29 CFR 1910.1200.		
Pesticide Registration:	This product is a pesticide registered by the Environmental Protection Agency (EPA) and is subject to certain FIFRA 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 chemicals.		
EPA Reg. No.:	19713-656		
FIFRA Label Signal Word:	DANGER		
FIFRA Label Information:	KEEP OUT OF REACH OF CHILDREN		
FIFRA Label Information:	Hazards to Humans and Domestic Animals		
	DANGER: Corrosive. Causes irreversible eye damage. Due to the corrosive nature, may be fatal if absorbed through skin. Harmful if swallowed. Do not get in eyes, on skin or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.		
	PERSONAL PROTECTIVE EQUIPMENT (PPE)		
	Manufacturers and other handlers must wear: Coveralls, protective eyewear (goggles, face shield or safety glasses), waterproof gloves and shoes plus socks.		
	Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this technical material. Do not reuse them.		
EPCRA SARA Title III Classification:			
Section 302:	Extremely Hazardous Substance	This material is not known to contain any	
	Notification:	Extremely Hazardous Substances.	
Sections 311 and 312:	Immediate (Acute) Health Hazard:	Yes	
	Delayed (Chronic) Health Hazard:	Yes	
	Fire Hazard:	No	
	Reactive Hazard:	No	
	Sudden Release of Pressure Hazard:	No	
Section 313 Toxic Release Inventory (TRI):	Fomesafen , CAS No.: 72178-02-0		
CERCLA Reportable Quantity (RQ):	Not listed / Not available		
SARA 304 Reportable Quantity (RQ):	Not listed / Not available		
RCRA Hazardous Waste Classification (40 CFR 261):	Not listed / Not available		
US EPA 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.		
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):	Fomesafen	Listed as causing:	Not listed
		Listing date:	Not listed
		Listing basis:	Not listed
	This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.		

SECTION 16: OTHER INFORMATION

Date Issued: May 03, 2021

Date Supersedes: July 21, 2020

Revision: 1

For all non-emergency questions about this product, please contact:

1700 Channel Avenue
PO Box 13327
Memphis, Tennessee 38113-0327, USA

Phone: 901-774-4370
Fax: 901-774-4666
Website: www.drexchem.com

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 above. 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.