

DREXEL DEFOL® 5 DEFOLIANT/DESICCANT WITH FIRE RETARDANT

SECTION 1: MATERIAL IDENTIFICATION

Product Name: Drexel Defol® 5 Defoliant/Desiccant with Fire Retardant
EPA Reg. No.: 19713-388
Product Usage: Defoliant, Desiccant, Fire Retardant

Manufacturer: Drexel Chemical Company
Address: 1700 Channel Avenue
 PO Box 13327
 Memphis, Tennessee, 38113-0327, USA
 901-774-4370

Emergency Telephone Numbers: CHEMTREC 800-424-9300
 DREXEL CHEMICAL COMPANY 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 Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide.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 IDENTIFICATION

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

Label Elements:
Signal Word:

WARNING



Classifications:
Hazard Class:

<u>Toxicity Study:</u>	<u>Category:</u>
Acute Toxicity, Inhalation	Category 4
Skin corrosion/ irritation	Category 2
Serious eye damage / irritation	Category 2B
Hazard to Aquatic Environment, short term (Acute)	Category 3
Hazard to Aquatic Environment, long-term (Chronic)	Category 4

Hazard Statements:

<u>H Code:</u>	<u>Statement:</u>
H332	Harmful is inhaled
H315	Causes skin irritation
H320	Causes eye irritation
H402	Harmful to aquatic life
H413	May cause long lasting harmful effects to aquatic life

Precautionary Statements:

Prevention: Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wash face, hands and any exposed skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Use only outdoors or in a well-ventilated area.
 In case of inadequate ventilation, wear respiratory protection.
 Avoid release into the environment.

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.
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.
Specific hazards: None available.

SECTION 3: COMPOSITION INFORMATION

<u>Chemical Name:</u>	<u>Synonym:</u>	<u>CAS No.:</u>	<u>EC No.:</u>	<u>RTECS:</u>	<u>% By Wt.:</u>
Active Ingredient: Sodium chlorate	Chlorate de sodium	7775-09-9	231-887-4	FO0525000	42.3%
Inert Ingredients:	N/A	N/A	N/A	N/A	57.7%

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: Treat symptomatically. If medical advice is needed, have product container or label at hand. This product has low oral, dermal, and inhalation toxicity. If swallowed, gastric lavage using an endotracheal tube may be preferred to vomiting. This product is a severe eye irritant, and may cause irritation to the skin and respiratory tract.

SECTION 5: FIRE FIGHTING MEASURES

Fire Fighting Media: Water mist/ spray / fog. Use water fog when fighting fires involving this product. Do not use CO₂ or dry chemical, do not blanket with foam. 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.

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: 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): Non-combustible
 Flash point: > 200°F
 Lower flammable limit (% by volume): N/Av
 Upper flammable limit (% by volume): N/Av

Hazardous Combustion Products: Irritating fumes and smoke.

National Fire Protection Association:

NFPA: 	Health	Fire	Reactivity
	1	2	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. 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. 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. 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. 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
Sodium chlorate	N/A	5 mg/m ³

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 Protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: 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 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.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements 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	Slurry
Appearance / Color	Colorless
Odor	Odorless
Odor threshold	Not available
pH	8.0 – 9.0
Melting point	Not available
Freezing point	<32°F
Boiling point	>212°F
Flash point	>200°F
Evaporation rate	Not available
Flammability	Not available
Upper flammability/explosive limits	Not available
Lower flammability/explosive limits	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	11.65 lbs. / gal.
Solubility in water	Complete
Solubility in organic solvents	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	7.4 cps
Explosive properties	Not available
Oxidizing properties	Not available
Dissociation Constant	Not available

SECTION 10: STABILITY AND REACTIVITY

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 high temperatures above 130°F (54.4°C). Avoid reducing agents.
Incompatible Materials:	If concentrate solution dries on flammable objects can act as an oxidizer.
Hazardous Decomposition Products:	Decomposition products can include toxic fumes, dense smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Potential routes of exposure/potential health effects: Skin contact. Eye contact. Inhalation.

Acute Oral:	LD₅₀ (Rat):	>5,000 mg/kg
Acute Dermal:	LD₅₀ (Rat):	>5,000 mg/kg
Acute Inhalation:	LC₅₀ (Rat):	2.09 mg/L
Eye Irritation:	(Rabbit):	Mildly irritating
Skin Irritation:	(Rabbit):	Slightly irritating
Skin Sensitization:	(Guinea Pig):	Non-sensitizer

Chronic Toxicity: May cause thyroid damage based on animal data.

Carcinogenicity: Not considered to be carcinogenic by IARC, ACGIH, NTP, or OSHA.

Mutagenicity: No data available

Teratogenicity: No data available

Reproductive Toxicity: No data available

Developmental Toxicity: No data available

**Specific target organ toxicity-
single exposure:** No data available / Not classified

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

Other Hazards Effects: No data available

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

Sodium chlorate This product is practically non-toxic to fish, poses no acute risks to birds, and is slightly toxic to aquatic invertebrates and plants.

ECO-ACUTE TOXICITY

Aquatic Toxicity:	Fish LC₅₀ 96 hour	Acute toxicity studies for fish consistent with practically non-toxic (no effects up to 1000 mg/L).
	Daphnia magna, EC₅₀ 48 hour	920 ppm
	Duckweed, EC₅₀	43 mg/L
Arthropod Toxicity:	Bees, Acute LD₅₀	No data available
Bird Toxicity:	Mallard Duck, LD₅₀	No acute risks to birds.
	Bobwhite Quail, LD₅₀	No acute risks to birds.
Algal Toxicity:	Algae, EC₅₀ 96 hour	133 mg/L
Soil Organism Toxicity:	Earthworm acute toxicity	No data available

Persistence and degradability: Low potential to bioaccumulate, is highly soluble and is completely ionized in water.
Bioaccumulation: Low potential to bioaccumulate, is highly soluble and is completely ionized in water.
Mobility in soil: Low potential to bioaccumulate, is highly soluble and is completely ionized in water.
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
IMDG: UN 2428, Sodium chlorate aqueous solution, 5.1, PG-III
IATA / ICAO: UN 2428, Sodium chlorate aqueous solution, 5.1, PG-III

UN Identification No.: UN2428
Proper Shipping Name: Sodium chlorate aqueous solution
Hazard Class: 5.1
Packing Group: III
Reportable Quantity: Not applicable
Environmental Hazard: Not applicable
Freight Description: Agricultural Defoliant/Desiccant, liquid, n.o.s.
ERG Guide No.: 140
Transport Information Note: None

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.: 19713-388
FIFRA Label Signal Word: CAUTION
FIFRA Label Information: KEEP OUT OF REACH OF CHILDREN
FIFRA Label Information: Hazards to Humans and Domestic Animals
 CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing.

EPCRA SARA Title III Classification:

Section 302:	Extremely Hazardous Substance Notification:	This material is not known to contain any Extremely Hazardous Substances.
Sections 311 and 312:	Immediate (Acute) Health Hazard:	Yes
	Delayed (Chronic) Health Hazard:	No
	Fire Hazard:	Yes
	Reactive Hazard:	Yes
	Sudden Release of Pressure Hazard:	No

Section 313 Toxic Release Inventory (TRI): This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

CERCLA/SARA 304 Reportable Quantity (RQ): Not listed / Not available

RCRA Hazardous Waste Classification (40 CFR 261): D001

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):	Sodium chlorate	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: April 14, 2020	Date Supersedes: September 11, 2017	Revision: 0
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For all non-emergency questions about this product, please contact:	1700 Channel Avenue	Phone: 901-774-4370
	PO Box 13327	Fax: 901-774-4666
	Memphis, Tennessee 38113-0327, USA	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.