

Date Issued: 01/08/2024 Supersedes: 03/30/2021

DREXEL MES-O-SATE[™] HERBICIDE

SECTION 1: MATERIAL IDENTIFICATION

Product Name: Drexel Mes-O-Sate™ Herbicide

EPA Reg. No.: 19713-694 **Product Usage:** Herbicide

Manufacturer: **Drexel Chemical Company** Address: 1700 Channel Avenue

PO Box 13327

Memphis, Tennessee, 38113-0327, USA

901-774-4370

800-424-9300 **Emergency Telephone** CHEMTREC Numbers: 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 Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide.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: Toxicity Study: Category: Serious eye damage / irritation Category 1 Skin sensitizer

Category 1B Hazardous to the aquatic environment, acute hazard Category 1

Hazard Statements: H Code: Statement:

> May cause an allergic reaction H317 H318 Causes serious eye damage H320 Causes eye irritation H400 Very toxic to aquatic life

Precautionary Statements: P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. Prevention:

P272 - Contaminated work clothing must not be allowed out of the workplace.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 - If on skin: Wash with plenty of water/If skin irritation or rash occurs: Get medical

advice/attention.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a poison center/doctor/if you feel unwell.

P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P363 - Wash contaminated clothing before reuse.

P391 - Collect spillage.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

Response: If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

> Remove person to fresh air and keep comfortable for breathing. Call POISON CENTER or If Inhaled:

> > 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

Chemical Name: Active Ingredient:	Synonym:	CAS No.:	EC No.:	RTECS:	<u>% By Wt.:</u>
Glyphosate Acid	N-Phosphonomethyl glycine	1071-83-6	213-997-4	MC1075000	20.5%
Metolachlor	2-chloro-N-(2-ethyl-6-methylphenyl)- N-(1-methoxypropan-2-yl)acetamide	51218-45-2	257-060-8	AN3430000	20.5%
Mesotrione	2-(4-methylsulfonyl-2- nitrobenzoyl)cyclohexane-1,3-dione	104206-82-8	600-533-4	N/A	2.05%
Inert Ingredients:	N/A	N/A	N/A	N/A	56.95%

SECTION 4: FIRST-AID MEASURES

Have the product container or label 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.

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 If medical advice is needed, have product container or label at hand.

Attention and Special None / Treat symptomatically

Treatment Needed: There is no specific antidote if this product is ingested.

SECTION 5: FIRE FIGHTING MEASURES

Fire Fighting Media: Dry chemical, CO₂, Foam, Water fog. 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.

Skin/Clothing Contact:



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. Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to Avoid," Section 10.

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:

Carbon oxides, nitrogen oxides, halogenated compounds, irritating fumes and smoke.

National Fire Protection Association:

NFPA:	Health	Fire	Reactivity	
200	2	1	0	
Ratings:	4-Extreme 3-Hig	h 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:

Special Handling: Spray solutions of this product should be mixed, stored and applied using only plastic, plastic lined steel, stainless steel or fiberglass/plastic containers. Concentrate should not be stored or maintained in long-term contact with galvanized steel, carbon steel, aluminum, brass or cast iron.

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	OSHA PEL ACGIH TLV	
Glyphosate Acid	N/A	N/A	5 mg/m ³
Metolachlor	N/A	N/A	5 mg/m ³
Mesotrione	N/A	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.



Protection:

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 A respirator is not normally required when handling this substance. Use effective engineering controls to

comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property Reported Value

Physical State
Appearance / Color
Odor
Odor threshold
PH (@5% dilution)
Melting point
Liquid
Tan brown
Mild odor
Mild odor
Not available
3.5 – 5.0
Not applicable

Freezing point 26°F

Boiling point Not applicable

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

Vapor density

Relative density (@ 21°C)

Solubility in water

Solubility in organic solvents

Partition coefficient (n-octanol/water)

Auto-ignition temperature

Decomposition temperature

Not available

Not available

Not available

Viscosity 800 – 1300cP @ 21°C

Explosive properties Not available Oxidizing properties Not available Dissociation Constant Not available % Volatiles 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: Concentrate should not be stored in galvanized steel, carbon steel or aluminum.

Brass and/or cast-iron fittings should not be used. Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel,

stainless or fiberglass/plastic.

Incompatible Materials: None known



Hazardous Decomposition Products: Decomposition products can include and are not limited to: Carbon oxides,

nitrogen oxides, ammonia and halogenated compounds. Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to

Avoid" above.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

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

Eye Irritation:(Rabbit):Minimally irritatingSkin Irritation:(Rabbit):Non-irritating

Skin Sensitization: (Guinea Pig): Skin sensitizer in animal test

Chronic / Sub-Chronic Toxicity: Glyphosate Acid Rat sub-chronic 90-day study – NOEL of 5000 ppm (410 – 440

mg/kg). Body weight reduction, clinical chemistry changes. No evidence of neurotoxic effects in acute and sub-chronic rat studies

(NOEL both studies 2000 mg/kg). No evidence of delayed

neurotoxic effects in hens (NOEL 2000 mg/kg).

Metolachlor No adverse effect has been observed in chronic toxicity tests.

Mesotrione No adverse effect has been observed in chronic toxicity tests.

Carcinogenicity: Glyphosate Acid This product does not contain any materials which are classified as

Carcinogenic by OSHA, ACGIH, or NTP. Glyphosate has been classified by the International Agency for Research on Cancer

(IARC) as "probable human carcinogen (Group 2A)".

Metolachlor Did not show carcinogenic effects in animal experiments. IARC,

ACGIH, NTP, OSHA not listed.

Mesotrione Did not show carcinogenic effects in animal experiments. IARC,

ACGIH, NTP, OSHA not listed.

Mutagenicity: Glyphosate Acid No data available

Metolachlor No data available Mesotrione No data available

Teratogenicity: Glyphosate Acid No data available

Metolachlor No data available
Mesotrione No data available

Reproductive Toxicity: Glyphosate Acid Did not show reproductive effects in animal experiments.

Metolachlor Did not show reproductive effects in animal experiments.

Mesotrione Did not show reproductive effects in animal experiments.

Developmental Toxicity: Glyphosate Acid No developmental effects seen in animal studies.

Metolachlor No developmental effects seen in animal studies.

Mesotrione No developmental effects seen in animal studies.

Reproductive Toxicity: Glyphosate Acid Did not show reproductive effects in animal experiments.

Metolachlor Did not show reproductive effects in animal experiments.

Mesotrione Did not show reproductive effects in animal experiments.



Specific target organ toxicity-

single exposure:

No data available / Not classified

Specific target organ toxicityrepeated exposure: No data available / Not classified

Other Hazards Effects:

No data available

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

Glyphosate Acid Metolachlor Mesotrione The information presented is for the active ingredient.

ECO-ACUTE TOXICITY

Aquatic Toxicity:

Rainbow Trout, LC₅₀

96 hour

Glyphosate Acid Metolachlor Mesotrione No data available 2.0 mg/kg

>120mg/L

Bluegill Sunfish, LC₅₀

96 hour

Glyphosate Acid Metolachlor Mesotrione 45 ppm 15.0 mg/kg >120mg/L

Daphnia magna, LC₅₀

48 hour

Glyphosate Acid Metolachlor Mesotrione 134 ppm 25.1 mg/L 900 mg/L

Arthropod Toxicity: Bees, Acute LD₅₀

Mallard Duck, LD₅₀

Glyphosate Acid Metolachlor Mesotrione

No data available

No data available No data available No data available

Bobwhite Quail, LD₅₀

Glyphosate Acid Metolachlor Mesotrione >2,000 mg/kg >10,000 ppm No data available

Algal Toxicity:

Bird Toxicity:

Green Algae, LC₅₀ 96 hour Glyphosate Acid Metolachlor Mesotrione

12.5 ppm 0.077 mg/L 4.5 mg/L

Soil Organism Toxicity:

Earthworm acute toxicity

No data available

Persistence and degradability:

Glyphosate Acid Metolachlor Not persistent in soil. Sinks in water (after 24h).

Low bioaccumulation potential. Not persistent in soil. Stable in

water. Sinks in water (after 24 h).

Mesotrione Low potential for bioaccumu

Low potential for bioaccumulation. Mesotrione has medium to

high mobility in soil.

Bioaccumulation: Glyphosate Acid

Metolachlor Mesotrione Not persistent in soil. Immobile in soil. Sinks in water (after 24h).

Low bioaccumulation potential. Low bioaccumulation potential.



Mobility in soil: Glyphosate Acid Not persistent in soil. Immobile in soil.

Metolachlor Not persistent in soil.

Mesotrione Medium to high mobility in soil.

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: NAFTA Not Regulated

IMDG: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Metolachlor/Glyphosate/

Mesotrione), 9, PG-III, Marine Pollutant

IATA / ICOA: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Metolachlor/Glyphosate/

Mesotrione), 9, PG-III

UN Identification No.: UN3082

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Metolachlor/Glyphosate)

Hazard Class: 9
Packing Group: III
Reportable Quantity: None

Environmental Hazard: Marine Pollutant

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

ERG Guide No.: 171
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.: 19713-694 **FIFRA Label Signal Word:** CAUTION

FIFRA Label Information: KEEP OUT OF REACH OF CHILDREN
Hazards to Humans and Domestic Animals

CAUTION: Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may

cause allergic reactions in some people.



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: No

Fire Hazard: No

Reactive Hazard: No

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): Glyphosate Acid Not listed / Not available

Metolachlor Not listed / Not available Mesotrione 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):

Glyphosate Listed as causing: Cancer

Listing date: 07/07/2017 Listing basis: LC-IARC

Metolachlor Listed as causing: Not listed

Listing date: Not listed Listing basis: Not listed

Mesotrione Listed as causing: Not listed

Listing date: Not listed Listing basis: Not listed

This product contains chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

SECTION 16: OTHER INFORMATION

Date Issued: January 08, 2024 Date Supersedes: March 30, 2021 Revision: 2

For all non-emergency questions about 1700 Channel Avenue Phone: 901-774-4370 **this product, please contact:** 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.