

**SAFETY DATA SHEET****DREXEL DICAM DE-ESTER® HERBICIDE****Section 1: Material Identification**

Product Name: Drexel Dicam De-Ester® Herbicide

EPA Reg No.: 19713-702

CAS NO: 1928-43-4 (2,4-D, 2-ethylhexyl ester)
1918-00-9 (Dicamba)

Formula: C₁₀H₂₂Cl₂NO₃ (2,4-D 2-ethylhexyl ester)
C₈H₆Cl₂O₂C₂H₇N (Dicamba)

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

Identifiers:

EINECS: 217-673-3 (2,4-D 2-ethylhexyl ester)
217-635-6 (Dicamba)

RTECS: AG8400000 (2,4-D 2-ethylhexyl ester)
DG7525000 (Dicamba)

DOT label: See Section 14.

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 Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide.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 toxicity – oral	Category 4
Acute toxicity – inhalation	Category 4
Eye damage/irritation	Category 1
Skin corrosion/irritation	Category 2
Sensitization-skin	Category 1B

Environmental hazards:	Aquatic hazard – acute	Category 1
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GHS label elements:**Signal Word:**

Danger

**Hazard statements:**

Causes serious eye irritation.
 Causes skin irritation.
 May cause an allergic skin reaction.
 Harmful if swallowed.
 Harmful if inhaled.

Precautionary statements:**Prevention:**

Wash exposed skin thoroughly after handling.
 Wear protective gloves.
 Wear eye protection/face protection.
 Avoid breathing dust/fume/gas/vapor/mist/spray.
 Use only outdoors or in a well-ventilated area.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing should not be allowed out of the workplace.

Response:

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 for treatment advice.**

If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

If swallowed: Call a poison control center or doctor if you feel unwell.

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

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

<u>Components</u>	<u>CAS No.</u>	<u>% By Wt.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Active Ingredient:				
2-Ethylhexyl ester of				
2,4-dichlorophenoxyacetic acid	1928-43-4	49.64%	10 mg/m ³	10 mg/m ³
Dicamba*	1918-00-9	10.73%	5 mg/m ³ TLV	N/Av

*Contains 1 pound of dicamba and 3.07 pounds of 2,4-D equivalent per gallon.

Section 4: First-Aid Measures

Have product container or 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: Immediately call a poison control center or doctor. Do not give any liquid to the person. 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 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.

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 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 upwind from 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 fire-fighting 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: Hydrogen chloride, organochloride products, oxides of nitrogen, or carbon monoxide.

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 a suitable absorbent and 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 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 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: 5mg/m³ (Dicamba Technical); 10 mg/m³ (2,4-D 2-ethylhexyl ester)

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: Wear long-sleeved shirt, long pants, and shoes plus socks when handling this material. Wear chemical-resistant apron when mixing or loading, cleaning up spills or equipment or otherwise exposed to the concentrate. 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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product concentrate. Do not reuse them.

Hand protection: Use chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or Viton ≥ 14 mils.

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. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Pilots must use an enclosed cockpit which meets the requirements listed in WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Section 9: Physical and Chemical Properties

Physical State:	Liquid
Color:	Clear yellow
Odor:	Petroleum
Flash Point:	$>200^{\circ}\text{F}$
Vapor Pressure (mmHg):	N/Av
Boiling Point:	N/Av
Vapor Density (air = 1) :	N/Av
Bulk Density:	9.32 Lbs./gal
Freezing Point:	$<20^{\circ}\text{F}$
Solubility in water:	$>$ Soluble
pH (5% solution):	2.4 @ 21°C
Viscosity:	35 cP @ 21°C

Section 10: Stability and Reactivity

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

Conditions to Avoid: None known

Incompatible Materials: None known

Hazardous Polymerization: Will not occur

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

Section 11: Toxicological Information

Data for 2,4-D 2-ethylhexyl ester:

Acute Toxicity:

Oral: LD50, Rat: 2,629 mg/kg
Dermal, LD50, Rat >2000 mg/kg
Inhalation, LC50, (24h), Aerosol, Rat: >5.4 mg/l
Eye Irritation (rabbit): Slight irritation
Skin Irritation (rabbit) None-to-slight
Sensitization Skin: Non-sensitizer

Carcinogenicity:

Not listed by NTP, ACGIH or OSHA. Listed as possible carcinogen, Class 2B, by IARC.

Data for Dicamba Technical:

Acute Toxicity:

Oral LD50, Rat: >1000 mg/kg
Dermal LD50, Rat: >2,000 mg/kg
Inhalation LC50, (24h), Aerosol, Rat: >5.4 mg/l
Eye Irritation (rabbit): Severe eye irritation
Skin irritation (rabbit): May cause skin irritation
Sensitization skin: May cause dermal sensitization

Carcinogenicity:

Not listed by IARC, NTP, ACGIH, or OSHA.

Teratogenicity, mutagenicity, and other reproductive effects: None known

Section 12: Ecological Information

Ecological information for 2,4-D 2-ethylhexyl ester:

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash waters.

LC50 rainbow trout, static, 96 h: 250 mg/l.
LC50, flathead minnow, static, 96 h: 344 mg/l.
LC50, bluegill, static. 96 h: 525 mg/l.
LC50, water flea (*Daphnia magna*), 185 mg/l.
EC50, blue-green algae: 153 mg/l.
EC50, green algae 5 d: 66.5 mg/l.
EC50, duckweed sp., static, Number of fronds, 14d: 0.58 mg/l.

Ecotoxicological data for Dicamba:

Dicamba dimethylamine salt may volatilize slightly from plants and ground surface but is not considered the major route of chemical dissipation or breakdown. Microbial activity is the primary route of degradation from soil. Laboratory and field studies show that dicamba dimethylamine salt is likely to break down in soil to half of its application concentration between one and 5 weeks. Dicamba dimethylamine salt is expected to degrade in aquatic systems even faster.

Aquatic Toxicity:

- Rainbow Trout, 96 hour, LC50: 1 ,000 mg/L
- Bluegill, 96 hour, LC50: 1,500 ppm
- Daphnia magna, 48 hour, EC50: 1,600 ppm
- Green algae: >100 mg/l

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 Classification:

- **≤ 33 gallons:** Non-regulated
- **> 33 gallons:** UN-3082, Environmentally Hazardous Substance, Liquid, n.o.s., (2,4-D, 2-ethylhexyl ester), 9, PG-III, RQ 100 lbs.

IMDG: UN 3082, Environmentally Hazardous Substance, Liquid, N.O.S. (2,4-D, 2-ethylhexyl ester), 9, PG-III Marine Pollutant

IATA: UN 3082, Environmentally Hazardous Substance, Liquid, N.O.S. (2,4-D, 2-ethylhexyl ester), 9, PG-III

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

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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 Hazard Statements: **DANGER: Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes, on skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.**

EPA/CERCLA Reportable Quantity: 1,000 lbs. Dicamba (CAS: 1918-00-9) (1000 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):** 2,4-D 2-ethylhexyl ester (CAS1928-43-4); Dicamba (CAS: 1918-00-9)
- **RCRA Waste Code:** Not applicable

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

- 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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