



SAFETY DATA SHEET

DREXEL DICAMBA DE-AMINE[®] HERBICIDE

Section 1: Material Identification

Product Name: Drexel Dicamba De-Amine[®] Herbicide

EPA Reg No.: 19713-680

CAS NO: 2300-66-5 Dimethylamine Salt of Dicamba (3, 6-Dichloro-o-anisic Acid)
2008-39-1 Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid

Formula: C₁₀H₁₃Cl₂NO₃ (DMA Dicamba)
C₁₀H₁₃Cl₂NO₃ (DMA 2,4-D)

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

Synonyms: DMA salts of Dicamba and 2,4-Dichlorophenoxyacetic acid

Identifiers:

- EINECS:** 218-951-7 DMA Dicamba
217-915-8 DMA 2,4-D
- RTECS No.:** DG7525000 Dicamba
AG8400000 DMA 2,4-D
- DOT label:** See Section 14 for Transportation Information

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 Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide.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
	Serious eye damage	Category 1
Environmental hazards:	Aquatic acute toxicity	Category 2

GHS label elements:

Signal word: Danger



Hazard statements:
 Harmful if swallowed.
 Harmful if inhaled.
 Causes serious eye damage.
 Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:
 Do not eat, drink or smoke when using this product.
 Avoid breathing vapors or mist. Use only outdoors or in a well-ventilated area.
 Wash thoroughly after handling.
 Wear eye protection/face protection.
 Avoid release to the environment.

Response:
If swallowed: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call Poison Control Center or Doctor if you feel unwell.
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 CENTER or doctor.
 Collect spillage.

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 regulations.

Section 3: Composition Information

<u>Components</u>	<u>CAS No.</u>	<u>% By Wt.</u>	<u>OSHA PEL:</u>	<u>ACGIHTLV:</u>
Active ingredients:				
Dimethylamine Salt of Dicamba (3,6-Dichloro-o-anisic Acid)	2300-66-5	12.4%	5 mg/m ³	5 mg/m ³
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	35.7%	5 mg/m ³	5 mg/m ³
Other ingredients:	51.9%	N/A	N/A	

Section 4: First-Aid Measures

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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Skin Contact: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands.

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

If Inhaled: Move person to fresh air; if effects occur, consult a physician.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Probable mucosal damage may contraindicate the use of gastric lavage.

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: Not applicable due to aqueous formulation.

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 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.

Hazardous Decomposition materials: May produce gases such as hydrogen chloride, nitrogen oxides and carbon oxides.

National Fire Protection Association:

(NFPA): Health: Fire: Reactivity:

3 1 1

(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 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. Keep upwind of spill. 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. Keep container closed. Keep away from heat, sparks and flame. Keep out of reach of children. See Section 8, Exposure Controls and Personal Protection.

Storage: Store in a cool, dry areas designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store below 32°F (10°C). If frozen or crystallized, slowly warm to 80 to 90°F and re-dissolve by rolling or shaking container before use. Do not store near children, food, foodstuffs, drugs or potable water supplies.

Section 8: Exposure Controls / Personal Protection

Personal Protection:

Eye/Face Protection: Wear/Use protective eyeglasses or chemical safety goggles.

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”). NOTICE:

The selection of a specific glove for a particular application and duration of use in a workplace should also take 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 glove materials, as well as the instructions/specifications provided by the glove supplier.

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 such as an OSHA/NIOSH-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. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

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: 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 and is preferred.

Section 9: Physical and Chemical Properties

Physical State:	Clear liquid
Color:	Yellow to Amber
Odor:	Slight ammonia
Flash Point:	Non-combustible (>200°F)
Vapor Pressure (mmHg):	Approx. 18 @ 68°F
Boiling Point:	>212°F
Vapor Density (air = 1):	N/Av
Relative Density (H₂O = 1):	1.165-1.21 g/ml @ 25.2° C (9.7 – 10.0 lbs/gal.)
Freezing Point:	32° F (0°C)
Solubility in water (wt. %):	Soluble
pH:	8 - 9
Viscosity:	9.507 cPs @ 25.2° C

Section 10: Stability and Reactivity

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

Conditions to Avoid: Avoid heat of open flame. Avoid excessive heat.

Incompatible Materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

Hazardous Polymerization: Will not occur

Thermal Decomposition: Under fire conditions may produce gases such as hydrogen chloride, nitrogen oxides, and carbon oxides.

Section 11: Toxicological Information

Toxicity data from studies conducted on a similar product:

Acute Toxicity:

Ingestion:

- LD50, (rat): 1256 mg/kg

Dermal:

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

Inhalation:

- LC50, (4h), (rat): >2.07 mg/l

Eye Irritation (rabbit):

- Severely irritating

Skin Irritation (rabbit):

- Slightly irritating

Sensitization Skin (guinea pig):

- Non-sensitizer

Repeated Dose Toxicity:

- Repeated overexposure to phenoxy herbicides may cause effects to kidneys, blood chemistry, and gross motor function. Repeated overexposure to dicamba may cause liver changes or a decrease in body weight.

Chronic Toxicity and Carcinogenicity:

- Prolonged overexposure to phenoxy herbicides can cause liver, kidney and muscle damage. IARC rates chlorophenoxy herbicides as 2B carcinogens. The U.S. EPA has given 2,4-D and dicamba a Class D classification (not classifiable as a human carcinogen).

Developmental Toxicity:

- Studies in laboratory animals with 2,4-D have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Animal tests with dicamba have not demonstrated developmental effects.

Reproductive Toxicity:

- No impairment of reproductive function attributable to 2,4-D has been noted in laboratory animal studies. Dicamba did not interfere with fertility in reproduction studies in laboratory animals.

Genetic Toxicology:

- Weight of evidence of study results is that 2,4-D is not mutagenic. Animal tests with dicamba have not demonstrated mutagenic effects.

Section 12: Ecological Information

Environmental fate:

- In laboratory and field studies, 2,4-D 2-ethylhexyl ester rapidly de-esterified to parent acid in the environment. The

typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks. Dicamba poorly binds to soil particles, is potentially mobile in the soil and highly soluble in water. Aerobic soil metabolism is the main degradative process for dicamba with a typical half –life of 2 weeks. Degradation is slower when soil moisture limits microbe populations. In water, microbial degradation is the main route of dicamba dissipation. Aquatic hydrolysis, volatilization, adsorption to sediments, and bioconcentration are not expected to be significant.

Ecotoxicity:

Aquatic Toxicity:

- **Data on 2,4-D, Dimethylamine salt:**
 - LC50, rainbow trout (*Oncorhynchus mykiss*), static, 96 h: 250 mg/l
 - EC50, bluegill (*Lepomis macrochirus*), static, 96 h: 525 mg/l
 - LC50, water flea (*Daphnia magna*), 185 mg/l
- **Data on Dicamba Dimethylamine Salt:**
 - LC50, rainbow trout (*Oncorhynchus mykiss*), static, 96 h: 100 mg/l
 - EC50, bluegill (*Lepomis macrochirus*), static, 96 h: 100 mg/l
 - LC50, water flea (*Daphnia magna*), 160 mg/l

Bird Toxicity:

- **Data on 2,4-D, Dimethylamine salt:**
 - Dietary LC50, bobwhite (*Colinus virginianus*): >5,620 ppm
 - Dietary LC50, mallard (*Anas platyrhynchos*): >5,620 ppm
- **Data on Dicamba Dimethylamine Salt:**
 - Dietary LC50, bobwhite (*Colinus virginianus*): >4,640 ppm
 - Dietary LC50, mallard (*Anas platyrhynchos*): >4,640 ppm

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:

- **<28 gallons per complete package:** Not regulated
- **≥28 gallons per complete package:** UN 3082, Environmentally hazardous substances, liquid, n.o.s., (2,4-D Salt), 9, PG-III, RQ 100 lbs.
- **>900 gallons:** UN 3082, Environmentally hazardous substances, liquid, n.o.s., (2,4-D Salt, Dicamba), 9, PG-III, RQ 100 lbs./1,000 lbs.

IMDG: UN 3082, Environmentally hazardous substances, liquid, n.o.s., (2,4-D Salt, Dicamba), 9, PG-III, RQ 100 lbs./1,000 lbs., Marine Pollutant

IATA: UN 3082, Environmentally hazardous substances, liquid, n.o.s., (2,4-D Salt, Dicamba), 9, PG-III, RQ 100 lbs./1,000 lbs., Marine Pollutant

Freight description: Agricultural herbicide, 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.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) 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

U.S. FEDERAL REGULATIONS

- **TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.
- **Section 313 Toxic Chemical(s):** Dimethylamine Dicamba (CAS No. 2300-66-5) 12.4% by weight in product; 2,4-D (CAS No. 94-75-7) - De minimus 0.1% Limit
- **Reportable Quantity (RQ) under U.S. CERCLA:** None specified
- **RCRA Waste Code:** U240 (2,4-D)
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

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

- Not listed

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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