

MATERIAL SAFETY DATA SHEET

Growmark Inc.
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In Case of Emergency, Call:
24 Hour Emergency Number
CHEMTREC: 800-424-9300

1. CHEMICAL IDENTIFICATION

Product Name: RADAR AM Product No.: G0102
EPA Signal Word: Danger
EPA Reg. Number: 1386-43-534
Active Ingredient (%) 2,4-Dichlorophenoxyacetic Acid, 47.2% CAS No.: 2008-39-1
Dimethylamine Salt
Chemical Name: 2,4-Dichlorophenoxyacetic Acid, Dimethylamine Salt
Chemical Class: Phenoxy Herbicide

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/LARC/OSHA Carcinogen
2,4-Dichlorophenoxyacetic Acid	10mg/m3	10mg/m3	No	No

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Hazardous chemical. Clear brown to dark brown liquid. Pungent odor. May cause severe eye irritation which may result in permanent impairment of vision or blindness. A single prolonged skin exposure may result in the material being absorbed in harmful amounts. Emergency personnel should wear a self contained breathing apparatus because noxious fumes are produced under fire conditions.

Potential Health Effects: This section includes possible adverse effects which could occur if this material is not handled in the recommended manner.

Eye: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.

Skin: A single prolonged skin exposure may result in the material being absorbed in harmful amounts.

Ingestion: Single dose oral toxicity is low. Amounts ingested incidental to normal handling conditions are not likely to cause injury.

Inhalation: Single exposure to vapors is not likely to be hazardous. Avoid breathing vapors or mist.

Systemic (other Target Organs) Effects: Excessive exposure may cause liver, kidney, gastrointestinal and muscular effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting and abdominal cramps and/or diarrhea. Birth defects are unlikely to occur.

Physical Properties

Appearance: Clear brown to dark brown liquid.

Odor: Pungent

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Give a large glass of milk or water and contact a physician or poison control center immediately.

Eye Contact: Flush eyes with water immediately and continuously for 15 minutes. Consult a physician.

Skin Contact: Wash skin with plenty of soap and water for 15 minutes. Remove contaminated clothing and wash before reuse. Consult a physician if irritation develops.

Inhalation: Remove to fresh air. Consult a physician if irritation develops or breathing is difficult.

Medical Condition Likely to be Aggravated by Exposure: Excessive exposure may cause liver, kidney, gastrointestinal and muscular effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting and abdominal cramps and/or diarrhea. Birth defects are unlikely to occur.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method): ND
Flammable Limits (% in Air): ND
Autoignition Temperature: ND
Flammability: ND

Hazardous Combustion Products: Noxious fumes produced under fire conditions may include hydrogen chloride and nitrogen oxides

Extinguishing Media: Foam, fog, or carbon dioxide. Do not allow runoff to enter sewers or waterways

Fire Fighting Instructions: Prevent human exposure to fire, fumes, and smoke.

Protective Equipment for Fire Fighters: Emergency personnel should wear full face, self contained breathing apparatus and impervious protective clothing

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak Contain spill. Absorb spill with sand, floor clay or dirt. Shovel or sweep up and mop affected area. Prevent liquid from entering sewers, waterways, or low areas. _____

7. HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage: Good housekeeping and controlling of dusts are necessary for safe handling of product. No smoking, open flames or sources of ignition in handling and storage area. Wash thoroughly with soap and water after handling. Do not contaminate water, food or feed by storage or disposal. Do not store near seeds, fertilizers, insecticides or fungicides. Store in original container above 40°F. If frozen, poor weed control may result. Do not store near heat or open flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

~~These precautions are suggested for conditions with a high potential for exposure. If handling procedures are such that there is only a low potential for exposure, less protection may be needed. Emergency conditions may require additional precautions.~~

Engineering Controls: Normal room ventilator should be satisfactory. Eyewash stations and safety showers should be easily accessible.
Eye Contact: Use chemical goggles. Eye wash station should be located in the immediate work area.
Skin Contact: Use protective clothing impervious to this material.
Inhalation: Use a NIOSH approved respirator when protection is required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear brown to dark brown liquid

Odor: Pungent

Boiling Point: >100°C, 212°F

Specific Gravity/Density: 1.1605 / 9.67

pH: ND

Solubility in H₂O: Emulsifiable

Vapor Pressure: 16.5mmHg @20°C

Vapor Density: ND

10. STABILITY AND REACTIVITY

Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur
Conditions to Avoid: Elevated temperatures
Incompatible Materials: Acids and oxidizing materials

Hazardous Decomposition Products HCL, Nitrogen oxides under fire conditions

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies

Ingestion: LD50 (rats) = 1000 mg/kg
Dermal: LLD50 (rabbits) = 900 mg/kg
Inhalation: Single exposure to vapors is not likely to be hazardous
Mutagenicity: Mutagenic effects are unlikely

Reproductive Hazard Potential: Excessive dietary levels of 2,4-D caused toxic effects (weight and viability reduction) in rats on a reproduction test.

Teratology (Birth Defects): Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals. Other effects were seen in the fetus only at doses which caused toxic effects to the mother.

Carcinogenic Potential: Various animal cancer tests have shown no reliable positive association between 2,4-D exposure and cancer.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATION

Disposal Method: Do not contaminate water, food, or feed by storage or disposal. If wastes cannot be disposed of by use according to label instructions, contact the appropriate state, local, or federal agency for guidance on disposal according to current environmental laws, rules, and regulations.

14. TRANSPORT INFORMATION

DOT Classification: Greater than RQ:
RQ; Environmentally hazardous substances, liquid, n.o.s., UN3082, PG III, (2,4-D Salt)

B/L Freight Classification: Compounds tree or weed killing, N.O.I.

15. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the issue or revision date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another, it is users responsibility to ensure that its activities comply with federal, state and local laws and regulations.

SARA Title III Classification

Section 311/312: Hazard Classes: Acute health hazard
Chronic health hazard

Section 313 chemical(s): This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the emergency planning and community right-to-know act (EPCRA) of 1986 and of 40 CFR 372

<u>Chemical Name</u>	<u>CAS Number</u>	<u>RO</u>	<u>% In Product</u>
2,4-Dichlorophenoxyacetic acid, dimethylamine	2008-39-1	21.6 gal	47.2

RCRA Classification: NA

TSCA Status: NA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 3
Flammability: 1
Reactivity: 1

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Reference MSDS: DowElanco, 2,4-D amine weed killer dated 8/20/1993
Manufactured for GROWMARK, INC., by Universal Cooperatives, Inc.

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