

Millennium Ultra Selective Herbicide

Riverdale

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Product Code: B322R

MSDS Number: 322

1. INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	Common Name	OSHA PEL	ACGIH LV
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	37.32	DMA Salt of 2,4-D	10 mg/m ³ (2,4-D Acid)	N/A
Monoethanolamine Salt of 3,6-Dichloro-2-Pyridinecarboxylic Acid	57754-85-5	5.09	Clopyralid	N/A	N/A
Dimethylamine Salt of Dicamba	2300-66-5	4.65	DMA Salt of Dicamba	N/A	N/A
Other ingredients including water* and sequesterents	*7732-18-5	52.94%	Inert Ingredients	N/A	N/A
Total		100.00%			

2. HEALTH DATA

PRIMARY ROUTE OF ENTRY:

Dermal/ Eye: Yes

Oral: Yes

Inhalation: No

SYMPTOMS OF OVEREXPOSURE: Nonspecific: muscle weakness, lethargy, loss of appetite, abdominal pains, headache, or shortness of breath.

ACUTE HEALTH EFFECTS

Inhalation: Avoid inhaling vapors or mist. May irritate the respiratory tract or cause dizziness.

Eyes: Direct and prolonged eye exposure to the concentrated product may cause corneal opacity, irreversible eye damage.

Skin: This product is considered a minimal skin irritant and is not a dermal sensitizer. Harmful if absorbed through the skin. Repeated or prolonged exposure may cause effects similar to those caused by ingestion.

Ingestion: Moderate to low oral toxicity. May cause muscle weakness, nausea, diarrhea, and abdominal pain. Fall in blood pressure or myotonia (prolonged muscular spasm) may occur under extreme exposure conditions. Can be fatal.

TOXICOLOGICAL DATA

Acute Oral LD50: 1.6 g/ kg (male rats); 1.6 g/ kg (female rats)

Acute Dermal LD50: > 4.5 g/ kg (male rabbits); 4.1 g/ kg (female rabbits)

Acute Oral LC50: > 4.38 mg/ l, no mortality (rabbits)

Eye Irritation: corrosive (rabbits)

Dermal Irritation: slight irritation at 72 hours (rabbits)

Dermal Sensitization: not a sensitizer (guinea pigs)

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Skin exposure may aggravate existing skin conditions. Exposure to mist may aggravate existing respiratory conditions.

CHRONIC HEALTH EFFECTS: Chronic overexposure to 2,4-D and dicamba may cause liver, kidney, gastrointestinal or muscular system effects. The EPA's Science Advisory Panel has given 2,4-D and dicamba a class D classification (not classifiable as to human carcinogenicity). Various epidemiological studies on 2,4-D have yielded conflicting results with the majority being negative. The current scientific consensus

is that there is no proven causal association between 2,4-D and cancer. Recent studies have not shown 2,4-D to be a mutagen or teratogen. Animal studies with dicamba have not demonstrated carcinogenic, teratogenic, or reproductive effects with the exception of slightly reduced fetal body weights and post implantation losses at the Maximum Tolerated Dose level. The majority of evidence suggests that it is not a mutagen. Clopyralid did not cause cancer in long term animal studies. Clopyralid was a teratogen at doses severely toxic to the mother, but not at doses still several times greater than those expected during normal exposure.

Agency Listing Carcinogen

NTP	IARC	OSHA
No	No	No

3. FIRST AID MEASURES

EYE CONTACT: Hold eyelids open and flush entire eye with a steady, gentle stream of water for 15 minutes. Get medical attention at once.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration preferably mouth to mouth. Get medical attention.

INGESTION: Call a physician or Poison Control Center. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Do not give anything by mouth to an unconscious person.

SKIN CONTACT: Wash affected area with soap and water. If irritation persists, get medical attention.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate gastric lavage. If large amounts of the product were ingested, the stomach should be emptied by gastric intubation.

4. FIRE FIGHTING MEASURES

FLASH POINT (F): N/A

FLASH POINT METHOD USED: None- aqueous solution

EXTINGUISHING MEDIA: Use CO₂ or dry chemical for small fires and foam, water fog, or water stream for large fires. Use water spray to cool closed containers.

COMBUSTION PRODUCTS: May include, but are not limited to: hydrogen chloride and nitrogen oxides.

SPECIAL FIRE FIGHTING PROCEDURES: May produce toxic and noxious fumes under extreme fire conditions. Use positive pressure self-contained breathing apparatus and acid resistant protective clothing. Any water used to extinguish the fire should be contained by diking to prevent contamination of the public water system.

UNUSUAL FIRE & EXPLOSION HAZARDS: Drums of product will burst from steam pressure under prolonged fire conditions.

See Section 13, REGULATORY INFORMATION, for NFPA ratings.

5. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:

Wear the suggested safety equipment when cleaning large spills (section 7). Surround with impervious material such as dirt to prevent run-off. Absorb product with an inert absorbent such as clay granules or wood shavings. Contain all affected material in a closed, marked container for proper disposal. Treat contaminated areas with detergent and water. 2,4-D spills are subject to CERCLA (Superfund) reporting requirements. Reportable Quantity (RQ) = 33 gallons of Millennium.

6. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Always use original container to store pesticides in a secured warehouse or storage building. Do not store near open containers of fertilizers, seeds, or other pesticides. Store at temperatures above 32 F. If allowed to freeze, remix before using. Freezing does not alter this product. Containers should be opened in well ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not contaminate water, food, or feed by storage or disposal.

WORK HYGIENIC PRACTICE:

After using this product, rinse gloves before removing, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. Remove saturated clothing as soon as possible and shower.

7. EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection is not normally required. Use a NIOSH/MSHA approved respirator when directly exposed to mist.

VENTILATION: Open ventilation. Reduce all mist with local exhaust.

PROTECTIVE GLOVES: Rubber or chemical-resistant gloves (See Precautionary Statements on product label for details)

EYE PROTECTION: Wear splash goggles, face shield, or safety glasses with front, brow, and temple protection.

OTHER PROTECTIVE EQUIPMENT: Long sleeved shirt, long pants, socks and shoes. Persons engaged in open pouring must wear coveralls or a chemical resistant apron.

8. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Dark amber liquid, amine odor

SOLUBILITY IN WATER: 100% in water

BOILING POINT (F): >212

VAPOR PRESSURE (mm Hg @ 20 C): N/D

SPECIFIC GRAVITY (H₂O = 1): 1.165

pH: 7.5 - 8.5

FREEZING POINT (F): 32

POUNDS PER GALLON: 9.70

9. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid fire conditions

INCOMPATIBILITY: Strong oxidizers or acids

HAZARDOUS BYPRODUCTS: None

HAZARDOUS POLYMERIZATION: Will Not Occur

10. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

2,4-D, clopyralid, and dicamba each have a relatively short half-life of, on average, 6-9 days, 40 days, and 1-4 weeks, respectively. The active ingredients in this product are all biodegraded by soil microbes.

ECOTOXICITY:

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants.

11. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL:

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. If this product cannot be disposed of by use according to the label, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA regional office.

CONTAINER DISPOSAL:

Triple rinse (or equivalent), adding rinsate to spray tank. Then offer for recycling, or puncture and dispose of in a sanitary landfill. Plastic containers are also disposable by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

12. TRANSPORTATION INFORMATION

55 gal, 220 gal, 260 gal

(All smaller container sizes are not DOT regulated)

HAZARD CLASS: 9

UN NUMBER: UN 3082

PACKING GROUP: III

GUIDE NUMBER: 171

PROPER SHIPPING NAME: RQ Environmentally Hazardous Substances, Liquid, N.O.S. (2,4-D Salt)

13. REGULATORY INFORMATION

SARA TITLE III; Section 311/312:
An immediate and delayed health hazard.

REPORTABLE QUANTITY (RQ):
100 lbs of 2,4-D acid equivalent or approximately 33 gallons of Millennium. For releases greater than the RQ, contact the National Response Center at (800) 424-8802.

HMIS INFORMATION		
HEALTH:	2	
FLAMMABILITY:	1	
REACTIVITY:	0	
PROTECTIVE:	D	

SARA TITLE III; Section 313- This product contains the following substances subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: Dimethylamine of Dicamba
CAS #: 2300-66-5

NFPA INFORMATION		
TOXICITY:	2	
FIRE:	1	
REACTIVITY:	0	
SPECIAL:	N	

The information given herein is to the best of our knowledge true and accurate. No warranty, however, expressed or implied, is made.