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Information: (800) 345-3330

Date Issued: 4/5/04

Supersedes: New

Product Code: 3981-RIV

MSDS Number: 398

MATERIAL SAFETY DATA SHEET:

Riverdale Endurance® Herbicide

1. INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS #</u>	<u>Weight %</u>	<u>Common Name</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
N3,N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine	29091-21-2	65.0%	Prodiamine	Not Established	Not Established
Other Ingredients		35.0%	Clay	15mg/m TWA (total):5 mg/m3 TWA (respirable)	2 mg/m TWA (respirable)
			Silica	10 mg/m3/(%SiO2+2) (respirable dust)	0.1 mg/m3 (respirable silica)
			Dispersing Agent	Not Established	Not Established
Ingredients not precisely identified are proprietary or non-hazardous.	Total	100.0%			

2. HEALTH DATA

PRIMARY ROUTE OF ENTRY:

Dermal/Eye: Yes **Oral:** **Inhalation:**

SYMPTOMS OF OVEREXPOSURE:

Causes mild eye and skin irritation

ACUTE HEALTH EFFECTS

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

Eyes: Causes moderate eye irritation

Skin: Practically non irritating, but is a skin sensitizer

Ingestion: May be harmful if swallowed

TOXICOLOGICAL DATA

Acute Oral LD50: >5,000 mg/kg rats, practically non-toxic
Acute Dermal LD50: >2,000 mg/kg rats, slightly toxic
Acute Inhalation LC50: >1.8 mg/l rats - 4 hours, slightly toxic

Eye Irritation: Mildly irritating (rabbits)
Dermal Irritation: Non-irritating (rabbits)
Dermal Sensitization: Practically a sensitizer (guinea pigs)

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

None known

CHRONIC HEALTH EFFECTS:

Carcinogen

<u>NTP</u>	<u>IARC</u>	<u>OSHA</u>
NO	NO	NO

Clay

Silica Group 2A

Other

Clay - 10mg/m TWA(total) 5mg/m3 TWA (respirable)*

Silica - Not Established

Dispersing Agent - 15 mg/m3 TWA (total)**

Reproductive /Developmental Effects - Prodiamine - Fetal toxicity at high dose levels (rats); developmental and maternal toxicity observed at 1g/kg/day.

Chronic/Subchronic Toxicity Studies - Liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high dose levels (rats); decreased body weight gains.

Carcinogenicity - Prodiamine - Benign thyroid tumors (rat). Non observed (mouse).

Toxicity of Other Components

Dispersing Agent - Exposure can result in eye, skin and respiratory tract irritation.

Clay - Long term exposure to high concentrations of this dust may product x-ray evidence of dust in the lungs. Continued long term overexposure may affect respiratory function in some individuals.

Target Organs

Active Ingredients - Prodiamine: Liver, thyroid

Inert Ingredients - Dispersing Agent: Eye, skin, respiratory tract

Clay: Lung

*recommended by NIOSH

**recommended by manufacturer

3. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

EYE CONTACT:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.
INHALATION:	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.
INGESTION:	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.
SKIN CONTACT:	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.
NOTE TO PHYSICIAN:	There is no specific antidote if this product is ingested. Treat symptomatically.

4. FIRE FIGHTING MEASURES

FLASH POINT (F):	Not Applicable
FLASH POINT METHOD USED:	Not Applicable
FLAMMABLE LIMITS (% IN AIR):	Lower: % Not Applicable / Upper: % Not Applicable
AUTOIGNITION TEMPERATURE:	Not Available
FLAMMABILITY:	Not Flammable
UNUSUAL FIRE, EXPLOSION & REACTIVITY HAZARDS:	This product is considered electrically conductive. Static electricity, mechanical sparks, open flames and certain hot surfaces (greater than 680°F [360°C]) can serve as ignition sources for this material. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
IN CASE OF FIRE:	Use dry chemical, foam, or CO ² extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

5. ACCIDENTAL RELEASE MEASURES

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

Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. If a solid, sweep up material and place in a compatible disposal container. If a liquid, cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

6. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Always use original container to store pesticides in a secure warehouse or storage building. This product should be stored in a cool, dry location. Container should be opened in a well ventilated area. All containers should be kept tightly sealed when not in use. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, feed or foodstuff by storage or disposal.

WORK HYGIENIC PRACTICE:

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. After handling this product, immediately wash the outside of gloves before removing them, then remove gloves and all other PPE. Immediately wash thoroughly and change into clean clothing.

Handle this material only in electrically conductive equipment. Electrically ground and bond this equipment as well as any worker who could contact a dust cloud formed of this material. Eliminate the presence of mechanical sparks and other ignition sources where dust clouds of this material could form. Bulk bags (FIBC) used to contain this material should be either type B or type C. If type C bags are used make sure they are electrically grounded before powder is discharged from the bag. This material is considered explosion class (Kst) 2. This material can energetically decompose at approximately 383 F (195°C). Do not store or process at temperatures above 320 F (160°C)

7. EXPOSURE CONTROL/PERSONAL PROTECTION

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation, packaging and use of the product. For commercial applications and/or on-farm applications consult the product label.

RESPIRATORY PROTECTION:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

VENTILATION:

Open ventilation. Reduce all dust with local exhaust.

PROTECTIVE GLOVES:

Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

EYE PROTECTION:

Where eye contact is likely, use chemical splash goggles.

OTHER PROTECTIVE EQUIPMENT:

Long sleeved shirt, long pants, rubber boots and a head coverage.

8. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:

Yellow granules; odorless

SOLUBILITY IN WATER:

Prodiamine: 0.013 ppm @ 77°F (25°C)

BOILING POINT (F):

Not Available

MELTING POINT:

Not Applicable

VAPOR PRESSURE (mmHg@20C):

Prodiamine: 1.0×10^{-6} mmHg @ 68°F (20°C)

SPECIFIC GRAVITY (H20=1)

0.63 g/cm³

pH

8.0 (5% in deionized water)

FREEZING POINT (F):

N/A

POUNDS PER GALLON:

N/A

9. STABILITY AND REACTIVITY

STABILITY:

Stable under normal use and storage conditions

CONDITIONS TO AVOID:

Thermal, mechanical and electrical ignition sources.

MATERIALS TO AVOID:

Oxidizing Agents

HAZARDOUS BYPRODUCTS:

Can decompose at high temperatures forming toxic gases.

HAZARDOUS POLYMERIZATION:

Will not occur

10. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

Prodiamine: No data available for the formulation. The information presented here is for Prodiamine. Does not bioaccumulate. Persistent in soil. Stable in water. Immobile in soil. Sinks in water (after 24 h).

ECOTOXICITY: (ACUTE)

Prodiamine: Bees LC50/EC50 > 100 ug/bee
Rainbow Trout 96-hour LC50 0.83 ppm
Bluegill Sunfish 96-hour LC50 0.55 ppm
Daphnia magna 48-hour LC50 0.66 ppm
Birds (8-day dietary - Bobwhite Quail) LC50 > 10,000 ppm
Birds (8-day dietary - Mallard Duck) LC50 > 10,000 ppm

11. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL:

Improper disposal of excess pesticide, spray mixtures or rinsate is a violation of Federal law. If container is damaged or if pesticide has spilled, contain all spillage. Place in a closed, labeled container for proper disposal. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

CONTAINER DISPOSAL:

Paper and Plastic Containers - Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or at an incineration facility, or, if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

12. TRANSPORTATION INFORMATION

DOT REGULATED CONTAINER SIZE: Not regulated by DOT

HAZARD CLASS: Class 9

UN NUMBER: 3077

PACKING GROUP: III

GUIDE NUMBER:

PROPER SHIPPING NAME: Herbicides, NOI

13. REGULATORY INFORMATION

SARA TITLE III; Section 311/312:

Acute and chronic health hazard. Reactive Hazard

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

REPORTABLE QUANTITY (RQ): None

Not Applicable

RCRA Classification - Not Applicable

TSCA Status - Exempt from TSCA, Subject to FIFRA

CALIFORNIA PROPOSITION 65: Not Applicable

INFORMATION - NFPA/HMIS		
HEALTH:	1	1
FLAMMABILITY:	2	2
INSTABILITY:	1	N/A
REACTIVITY:	N/A	1

RATINGS	
0	MINIMAL
1	SLIGHT
2	MODERATE
3	SERIOUS
4	EXTREME

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