



For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night: 1-800-424-9300.  
For Medical Emergencies Only, Call 1-877-325-1840.

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Riverdale® Manor® Selective Herbicide  
**Synonyms:** Methyl 2-[ [ [ (4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate  
**EPA Reg. No.:** 228-373  
**Company Name:** Nufarm Americas Inc.  
 1333 Burr Ridge Parkway, Suite 125A  
 Burr Ridge, IL 60527  
**Date of Issue:** July 14, 2005 **Supersedes:** May 11, 2000  
**Sections Revised:** All - new ANSI format

### 2. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance and Odor:** Light brown granules with slight odor.

**Warning Statements:** Keep out of reach of children. CAUTION. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

**Potential Health Effects:**

**Likely Routes of Exposure:** Eye and skin contact.

**Eye Contact:** Causes moderate eye irritation. May cause tearing, pain or blurred vision.

**Skin Contact:** Harmful if absorbed through skin. Repeated dermal contact may cause skin irritation with itching, burning, redness, swelling or rash.

**Ingestion:** This product is no more than slightly toxic based on toxicity studies.

**Inhalation:** This product is no more than slightly toxic if inhaled based on toxicity studies.

**Medical Conditions Aggravated by Exposure:** None presently known.

See Section 11: TOXICOLOGICAL INFORMATION for more information

**Potential Environmental Effects:**

This product has very low toxicity to both avian and aquatic organisms.

See Section 12: ECOLOGICAL INFORMATION for more information

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Metsulfuron Methyl	74223-64-6	60.0
Other Ingredients		40.0

### 4. FIRST AID MEASURES

**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 on Skin:** 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 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.

**If Inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

## 5. FIRE FIGHTING MEASURES

**Flammability Properties:** Not a fire or explosion hazard. Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

**Extinguishing Media:** Water Spray, Foam, Dry Chemical, CO<sub>2</sub>.

**Special Fire Fighting Procedures:** Evacuate personnel to a safe area. Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Unusual Fire and Explosion Hazards:** If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material.

**Hazardous Decomposition Materials (Under Fire Conditions):** May produce gases such as sulfur oxides, nitrogen oxides, and carbon oxides.

### National Fire Protection Association (NFPA) Hazard Rating:

**Rating for this product: Health: 1 Flammability: 1 Reactivity: 0**

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

**Methods for Containment:** Contain spill, sweep or scoop up and place in container for possible land application according to label directions or for proper disposal.

**Methods for Clean-Up and Disposal:** Sweep up and place in suitable containers for later disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

**Other Information:** Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

## 7. HANDLING AND STORAGE

Keep away from heat, sparks and flames.

### Handling:

Avoid contact with skin, eyes or clothing. Users should 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.

### Storage:

Always use original container to store pesticides in a secured warehouse or storage building. Do not store near open containers of fertilizer, seed, or other pesticides. Do not contaminate water, food or feed by storage or disposal.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### **Engineering Controls:**

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

### **Personal Protective Equipment:**

**Eye/Face Protection:** To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash should be readily accessible to the work area.

**Skin Protection:** To avoid contact with skin, wear long-sleeved shirt and long pants, shoes, socks and chemical-resistant gloves made of any waterproof materials such as polyethylene or polyvinyl chloride. An emergency shower should be readily accessible to the work area.

**Respiratory Protection:** Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

**General Hygiene Considerations:** Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

### **Exposure Guidelines:**

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Metsulfuron Methyl	NE	NE	NE	NE	NE

NE = Not Established

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** Light brown granules with slight odor.

<b>Boiling Point:</b>	Not applicable	<b>Solubility in Water:</b>	Dispersible
<b>Density:</b>	33.9 pounds/gallon	<b>Specific Gravity:</b>	1.47
<b>Evaporation Rate:</b>	Not applicable	<b>Vapor Density:</b>	Not applicable
<b>Freezing Point:</b>	Not applicable	<b>Vapor Pressure:</b>	Not applicable
<b>pH:</b>	Not available	<b>Viscosity:</b>	Not applicable

**Note:** Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** This material is stable under normal handling and storage conditions.

**Conditions to Avoid:** Excessive heat. Do not store near heat, sparks and flames.

**Incompatible Materials:** None reasonably foreseeable.

**Hazardous Decomposition Products:** Under fire conditions, may produce gases such as sulfur oxides, nitrogen oxides, and carbon oxides.

**Hazardous Reactions:** Hazardous polymerization will not occur.

## 11. TOXICOLOGICAL INFORMATION

### **Toxicological Data:**

Except as noted, data from laboratory studies conducted on this product.

**Oral:** Rat LD<sub>50</sub>: >5,000 mg/kg; FIFRA Category IV

**Dermal:** Rabbits LD<sub>50</sub>: >2,000 mg/kg; FIFRA Category III

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >5.3 mg/l; FIFRA Category IV (data on active ingredient)

**Other:** This product is a slight eye irritant, but is not a skin irritant or skin sensitizer in animal tests.

**Toxicity of Metsulfuron Methyl:**

Single exposures of animals to Metsulfuron Methyl by inhalation caused body weight loss and other nonspecific effects. Repeated applications of Metsulfuron Methyl to the skin on rabbits caused skin irritation but no other changes were observed. Repeated oral doses of Metsulfuron Methyl produced decreased body weight gain and decreased liver weights when compared to the control group. Long term administration caused body weight loss.

Animal testing indicates that Metsulfuron Methyl does not have carcinogenic, developmental, or reproductive effects. There is a report indicating that Metsulfuron Methyl produced genetic damage in a mammalian cell culture test; however, other tests with Metsulfuron Methyl in bacterial and mammalian cell cultures and in animals did not produce genetic damage. The weight of evidence suggests that Metsulfuron Methyl does not cause genetic damage.

**Assessment Carcinogenicity:** None listed with ACGIH, IARC, NTP or OSHA.

See Section 2: HAZARDOUS IDENTIFICATION for more information.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:**

Data on Metsulfuron Methyl

96-hour LC <sub>50</sub> Bluegill:	>150 ppm
96-hour LC <sub>50</sub> Rainbow Trout:	>150 ppm
Bobwhite Quail LD <sub>50</sub> :	>5,620 mg/kg
Mallard Duck LC <sub>50</sub> :	>2,510 mg/kg

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling and Disposal:**

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

## 14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

For Department of Transportation (DOT) regulatory information, if required, consult transportation regulations, product-shipping papers or call Nufarm's DOT Manager at 708-755-2104, Monday through Friday, 8:00 AM to 5:00 PM Central Time.

**15. REGULATORY INFORMATION****U.S. Federal Regulations:**

**TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

**SARA Hazard Notification/Reporting:**

**Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):** Acute

**Section 313 Toxic Chemical(s):** None

**Reportable Quantity (RQ) under U.S. CERCLA:** None

**RCRA Waste Code:** None

**State Information:**

Other state regulations may apply. Check individual state requirements.

**California Proposition 65:** Not listed

**16. OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

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