



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division, HTF:BT  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg.  
Number:

228-373

Date of Issuance:

DEC 20 1999

NOTICE OF PESTICIDE:

Registration  
 Reregistration

under FIFRA, as amended:

Term of Issuance:

Conditional

Name of Pesticide Product:

Riverdale Mission  
Selective Herbicide

Name and Address of Registrant (include ZIP Code):

Riverdale Chemical Company  
425 West 194<sup>th</sup> Street, Glenwood, IL 60425-1584

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5), 3(g) or FIFRA section 4 when the Agency requires all registrants of similar products to submit data.
2. Make the following label change:
  - a. Revise the EPA Registration Number to read, "EPA Reg. No. 228-373".
  - b. In the Directions for Use section, move the Use Precautions subsection to the very end, just before the Storage and Disposal box.
3. Submit two copies of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Signature of Approving Official:

*[Handwritten Signature]*

Date:

DEC 20 1999

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

RIVERDALE

DEC 20 1999

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.

MISSION™ SELECTIVE HERBICIDE

228-373

A Water Dispersible Granule

Selectively controls annual and perennial weedy grasses  
and broadleaf weeds, including rosette and vining type dicots.  
Also controls Bahiagrass in Bermudagrass areas.

Recommended for use by professional turfgrass Managers

ACTIVE INGREDIENT:

Metsulfuron Methyl Methyl 2-[[[(4-methoxy-5-methyl-1,3,5-triazin-2-yl)  
-amino]carbonyl]amino]sulfonyl]benzoate . . . . .

60.0%

INERT INGREDIENTS: . . . . .

40.0%

TOTAL . . . . . 100.0%

Mission™ is a Trademark of Riverdale Chemical Company

U.S. Patent 4,383,113

KEEP OUT OF REACH OF CHILDREN  
CAUTION  
SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS 2 OZS.

EPA REG. NO. 228-

EPA Est. NO. 352-WV-1

MANUFACTURED BY

RIVERDALE CHEMICAL COMPANY

GLENWOOD, ILLINOIS 60425-1584

Riverdale Mission™ Selective Herbicide

**PRECAUTIONARY STATEMENTS****HAZARDS TO HUMANS AND DOMESTIC ANIMALS****CAUTION**

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear: Long-sleeved shirt and long pants, shoes, socks and chemical resistant (Category A) gloves. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENGINEERING CONTROL STATEMENTS:**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

**USER SAFETY RECOMMENDATIONS**

**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.

**STATEMENT OF PRACTICAL TREATMENT**

- IF ON SKIN:** Wash with plenty of soap and water. Get medical attention if skin irritation persists.
- IF IN EYES:** Flush eyes with plenty of water. Call a physician if eye irritation persists.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff water may flow, during periods of intense rainfall or to water saturated soils as off-target movement and injury may occur. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

Do not apply this product in a way that will contact workers or other persons, either

## Riverdale Mission™ Selective Herbicide

directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the Agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Workers Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls, shoes, socks and chemical resistant (Category A) gloves.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter treated areas without protective clothing until sprays have dried.

Mission™ Selective Herbicide is for use on Ornamental Turf, such as Lawns, Parks, Cemeteries, Golf Courses (Fairways, Aprons, Tees and Roughs) and similar non-crop areas. This product may also be used on Sod Farms.

Controls the following perennial and annual weedy grasses:

Bahigrass

Foxtail

Ryegrass

Controls the following broadleaf(dicot) weeds:

Annual sowthistle  
Aster  
Bittercress  
Blue mustard  
Buckhorn  
Bur buttercup  
Canada thistle  
Carolina geranium  
Chicory  
Clover(white)  
Common chickweed  
Common groundsel  
Common mullein  
Common purslane

Common sunflower  
Common yarrow  
Conical catchfly  
Cow cockle  
Crown vetch  
Curly dock  
Dandelion  
Dog fennel  
False chamomile  
Fiddleneck tarweed  
Field pennycress  
Flixweed  
Goldenrod  
Henbit

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## Riverdale Mission™ Selective Herbicide

Goldenrod	Spurge (prostrate)
Henbit	Sweet clover
Hoary cress (whitetop)	Tansy mustard
Kochia	Treacle mustard
Lambsquarters	Tumble mustard
Miners lettuce	Virginia buttonweed
Pennsylvania smartweed	Wild carrot
Plaintain	Wild celery
Prickly lettuce	Wild garlic
Prostrate knotweed	Wild lettuce
Redroot pigweed	Wild mustard
Redstem filaree	Wild onion
Shepherdspurse	Wood sorrel (oxalis)
Smallseed flaxweed	
Smooth pigweed	

For use only on Kentucky Bluegrass, fine Fescue, Bermudagrass and St. Augustine grass turf areas.

**USE PRECAUTIONS**

Use lower rates for minimum chlorosis of the turf.

Do not apply Mission Selective Herbicide to turf under stress from drought, insects, disease, cold temperatures, high temperatures of above 85°F on cool season grasses, or poor fertility as injury may result.

Do not apply to turf less than 1 year old.

Do not use on Bahiagrass where it is the desired turf, as severe injury may result.

Do not plant ornamentals such as shrubs, and trees in treated areas for at least 1 year after the last application, or bedding plants for at least 2 years.

**IMPORTANT**

Addition of a nonionic surfactant of at least 80% active ingredient at 0.25 percent by volume (1 qt/gal) provides maximum performance, but may temporarily increase chlorosis of the turf.

Allow one week between the application of Mission Selective Herbicide and other control (pesticide containing) products. (This guideline can be relaxed where severe insect or disease attack requires immediate treatment).

**DO NOT USE ON FOOD OR FEED CROPS.** Injury to or loss of desirable trees or other plants may result from failure to observe the following: Do not apply Mission (except as recommended) or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.

When overseeding, wait 2 months (8 weeks) after application. Do not apply to any body of water, including streams, irrigation water or wells. Do not apply where runoff water may flow onto agricultural land, as injury to crops may result.

Do not allow spray drift onto adjacent crops or other desirable plants or trees as injury may occur.

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Follow these practices to minimize drift:

- Stop spraying if wind speed becomes excessive. Spray drift can occur at wind speeds less than 10 MPH. If sensitive plants are downwind, extreme caution must be used. Do not spray if winds are gusty.
- High temperatures, drought and low relative humidity increase the possibility of harmful spray drift. Caution must be used when these conditions are present and sensitive plants are nearby.
- Use large droplet size sprays to minimize drift.
- Use spray pressures of 35 psi or less when applying this product.

## HOW TO USE

Use spray volumes of 20 to 80 gal/acre and pressures of 25 to 35 psi at the following rates of Mission Selective Herbicide for the weeds listed below:

0.125 to 0.25 OZ. PRODUCT/ACRE

ryegrass (greens)

0.25 to 0.33 OZ. PRODUCT/ACRE

Bittercress  
Blue mustard  
Bur buttercup  
Chickweed  
Chicory  
Clover (white)  
Creeping beggarweed  
Dandelion  
Field pennycress

Ground ivy (Fall)  
Parsley-piert  
Prostrate spurge  
Redstem filaree  
Spurweed  
Wild carrot

0.33 to 0.5 OZ. PRODUCT/ACRE

Annual sowthistle  
Aster  
Carolina geranium  
Common yarrow  
Crown vetch  
Florida betony  
Ground ivy (Spring\*)  
Henbit  
Lambsquarters  
Lespedeza  
Miners lettuce  
Plantain  
Prickly lettuce  
Ragweed  
Redroot pigweed

Ryegrass (fairways)  
Seedling dogfennel  
Shepherdspurse  
Smooth pigweed  
Smallseed falseflax  
Sweet clover  
Tansy mustard  
Treacle mustard  
Tumble mustard  
Wild celery  
Wild garlic  
Wild lettuce  
Wild Onion  
Woodsorrel (oxalis)

0.25 to 0.5 OZ. PRODUCT/ACRE

Bahiagrass\*

0.5 to 1 OZ. PRODUCT/ACRE

Brazil pusley  
Buckhorn plantain

Canada thistle\*\*  
Curly dock

## Riverdale Mission™ Selective Herbicide

Common groundsel  
Common purslane  
Common sunflower  
Crabgrass  
Dogfennel  
Dollarweed\*

Foxtail  
Hoarycress (whitetop)  
Kochia  
Pennsylvania smartweed  
Plantain  
Prostrate knotweed  
Sida (southern)  
Virginia buttonweed\*\*\*  
Wild mustard

## Florida pusley

\*A repeat application may be required in 4 to 6 weeks.

\*\*Suppression only involving a visual reduction in competition compared to an untreated area.

\*\*\*Controls seedling Virginia buttonweed. Suppression only of more mature plants. Repeat application may be required in 4 to 6 weeks.

The required amount of Mission Selective Herbicide should be added when the spray tank is half full of water and, with agitator running, add the proper amount of product. Finish adding the required amount of water. Continuous agitation is required to keep the product in suspension.

Spray preparations of this product may degrade in acid solutions if not used in 24 hours; it is stable in alkaline solutions. Thoroughly reagitrate before using.

Tank mixes with other registered herbicides should be tested for compatibility before full scale mixing. Use mechanical or bypass agitation to thoroughly mix the spray suspension. It is not necessary to premix this product with water in a separate container prior to adding it to the spray tank. This product should always be added to the tank first, before any other herbicides or adjuvants.

Use on Kentucky Bluegrass and Fine Fescue: Apply 0.25 to 0.5 oz of Mission Selective Herbicide per acre for control of the listed weeds. Do not exceed 0.5 oz per acre within a 9-month period.

Use on St. Augustinegrass, Bermudagrass and Zoysiagrass (Meyers and Emerald): Apply 0.25 to 1.0 oz of Mission per acre for weed control. Some chlorosis or stunting of the turfgrass may occur following application.

Bahiagrass Control: For the selective control of Bahiagrass in Bermudagrass turf, use 0.25 to 0.75 oz of Mission Selective Herbicide per acre. Use the higher rates of the range on Argentine, Common and Paraguayan Bahiagrass. Apply a repeat treatment in 4 to 6 weeks if necessary. Some chlorosis or stunting of the Bermudagrass may occur following the application.

Use on Centipedegrass: Apply 0.25 to 0.5 oz. of this product per acre for weed control. Some chlorosis or stunting of the turfgrass may occur following the application.

**IMPORTANT:** Addition of a nonionic surfactant of at least 80% active ingredient at 0.25 percent by volume (1 qt/100 gal) provides maximum performance, but may temporarily increase chlorosis of the turf.

Allow one week between the application of Mission and other control (pesticide-containing) products. (This guideline can be relaxed where a severe insect or disease attack requires immediate treatment.)

**RECOMMENDED SPRAYER CLEANUP**

Immediately after spraying thoroughly remove all traces of Mission Selective Herbicide from mixing and spray equipment as follows:

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- 1) Drain tank, rinse interior surface of tank, then flush tank, boom and hoses with clean water for a minimum of 5 minutes.
- 2) Fill the tank with clean water, then add an ammonia cleaning solution. Use one gallon ammonia (containing 3% active) per 100 gallons of water. Turn on sprayer long enough to flush through boom, hoses and nozzles. Stop spraying, but keep agitator working in the tank for 15 minutes, then drain.
- 3) Repeat Step 2.
- 4) Repeat Step 1.
- 5) Nozzles and screens should then be removed and cleaned separately. To remove traces of cleaning solution, rinse the tank thoroughly with clean water and flush through hoses and boom.
- 6) Flush boom and hoses with clean water for 5 minutes just prior to using the sprayer for the first time after the Mission application.

**STORAGE AND DISPOSAL**

**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. Do not contaminate water, food or feed by storage or disposal.

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

**CONTAINER 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, stay out of smoke.

**WARRANTY**

Riverdale warrants that this herbicide conforms to the chemical description on its label. When used in accordance with label directions under normal conditions, this herbicide is reasonably fit for its intended purposes. Since timing, method of application, weather, plant and soil conditions, mixtures with other chemicals, and factors affecting the use of this product are beyond our control, no warranty is given concerning the use of this product contrary to label directions or under conditions which are abnormal or not reasonably foreseeable. The user assumes all risks of any such use.