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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

APR 26 1990

Mr. Russell F. Sawyer
Riverdale Chemical Company
425 West 194th Street
Glenwood, IL 60425-1584

Dear Mr. Sawyer:

Subject: Application for Label Amendment
Riverdale 10% Dacthal Granules
EPA Registration No. 228-99
Your Submission Dated February 9, 1989

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit one (1) copy of your final printed labeling before you release the product for shipment.
3. Under "Precautionary Statements," note the correct spelling of "reuse."

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 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.

Sincerely yours,

LJS
Larry Schnaubelt
Acting Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (H7504C)

Enclosure
52557: I: CR-43: Ikeda: LMF-16: KENCO: 3/28/89: 4/6/89: SG: vo: ek: rw
R: 52558: Ikeda: LMF-16: KENCO: 3/29/89: 4/10/89: rw:

CONCURRENCES

SYMBOL	SURNAME	DATE					
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PH23 228-99

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ACCEPTED
with COMMENTS
EPA Letter Dated

April 26, 1989

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

228-99

RIVERDALE
10% DACTHAL GRANULES

Pre-emergent herbicide containing granular Dacthal^(R) to prevent annual
grasses and broadleaf weeds in flower gardens, around
ornamentals, vegetable gardens and turf (ornamental,
golf course fairway, and athletic field).

ACTIVE INGREDIENT:

DCPA (dimethyl tetrachloroterephthalate) 10.0%

INERT INGREDIENTS: 90.0%

TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panel for other Precautionary Statements

EPA REG. NO. 228-99

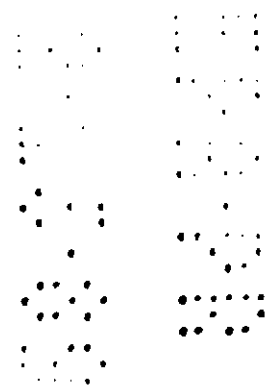
EPA EST. NO. 228-IL-1

NET WEIGHT

Manufactured By

RIVERDALE CHEMICAL COMPANY

Glenwood, Illinois 60425-1584



April 26, 1989

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for use as a pesticide registered under EPA Reg. No. 825-99

PRECAUTIONARY STATEMENTS ✓

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling. ✓

If in Eyes: Flush with plenty of water. Call a physician if irritation persists. ✓

IMPORTANT! If pesticide comes in contact with skin, wash off with soap and water. Always wash hands, face, and arms with soap and water before smoking, eating, drinking, or toileting. ✓

USE ONLY WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT DURING MIXING/LOADING AND APPLYING, REPAIR AND CLEANING OF MIXING, LOADING, AND APPLICATION EQUIPMENT, DISPOSAL OF THE PESTICIDE, AND EARLY REENTRY INTO TREATED AREAS: Wear a long-sleeved shirt and long-legged pants and chemical resistant gloves. ✓

Do not enter treated areas for 24 hours after application unless wearing long-sleeved shirt and long pants. ✓

AFTER WORK: Before removing gloves, wash them with soap and water. Take off all work clothes and shoes. Shower using soap and water. Do not reuse contaminated clothing. Clothing worn during work must be laundered separately from household articles. Clothing that becomes heavily contaminated or drenched must be destroyed according to State and local regulations. HEAVILY CONTAMINATED OR DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED. ✓

ENVIRONMENTAL HAZARDS ✓

Collect and incorporate granules spilled on the soil surface. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water when disposing of equipment washwaters. ✓

10% Dacthal Granules

A selective pre-emergent herbicide for control of annual grasses and certain broadleaf weeds in flower and vegetable gardens and ornamental turf. ✓

Read entire label carefully and use only as directed. ✓

GENERAL INFORMATION

Riverdale 10% Dacthal Granules is a granular formulation for use as a pre-emergent application for control of crabgrass and other annual grasses and certain broadleaf weeds on mineral soils. ✓

10% Dacthal Granules is recommended for use on Turf; Home Flower Gardens; Nursery Stock; Strawberries; Seeded Crops: beans (dry and snap), broccoli, brussels sprouts, cabbage, cauliflower, collards, cucumbers, garlic, horseradish, kale, melons (cantaloupe, honeydew, watermelon), mustard greens, onions, potatoes (whole and cut pieces), Southern peas (black-eyed), soybeans, squash (winter and summer), turnip greens and turnips; Transplant Crops: broccoli, brussels sprouts, cabbage, cauliflower, eggplant, garlic, peppers, onions, sweet potatoes, tomatoes and yams.

For the control of grasses and some broadleaf weed species, such as smooth and large crabgrass, green foxtail, yellow foxtail, lovegrass, witchgrass, carpetweed, common chickweed, lambsquarters, purslane and Florida pusley. 10% Dacthal Granules is recommended at 80-90 pounds per acre. A slightly higher rate of application (up to 105 pounds per acre) of this product may be required for control of barnyardgrass, ground cherry, dodder, browntop penicium, goosegrass, johnsongrass from seed, and redroot pigweed. For control of nodding spurge, spotted spurge or prostrate spurge, apply 105 to 120 lbs. of 10% Dacthal Granules in mid-April or when annual weed seeds, such as crabgrass, germinate. Repeat application 6 - 8 weeks later. A rate of 150 lbs. per acre is recommended for control of annual bluegrass in turf. When 10% Dacthal Granules is used at the recommended rate, up to 3 months weed control can be expected. Bermudagrass, johnsongrass, established from rhizomes, nutsedge, galinsoga, wild mustard, ragweed, smartweed and velvetleaf have not been effectively controlled with 10% Dacthal Granules.

Application should be made to a uniform weed-free soil surface within 2 - 3 days maximum following cultivation to prevent sub-surface germinating weeds from becoming established. Disturbing the soil surface following application will reduce effectiveness. Rates of application can be reduced by banding. Lawn spreaders should be properly calibrated prior to use to deliver 10% Dacthal Granules at prescribed rate. Settings may vary between spreaders because of condition and other factors.

10% Dacthal Granules can also be applied by the shaker can method. The ideal way of doing this is to measure off the area to be treated into small plots and then evenly sprinkle the prescribed quantity of 10% Dacthal Granules on this area.

Conversion Table - Acre and Smaller Areas

If Rate per Acre is	Amount of 10% Dacthal Granules to Apply	
	250 sq. ft.	1,000 sq. ft.
80 pounds	7½ oz.	1 lbs. 14 oz.
90 pounds	8½ oz.	2 lbs. 1 oz.
105 pounds	9½ oz.	2 lbs. 6 oz.
150 pounds	14 oz.	3 lbs. 8 oz.

If there is no rain within three or four days after 10% Dacthal Granules application, sprinkler irrigation (½ to 1 inch of water) should be used for best results.

Replanting: Replanting crops other than those included on this label in Dacthal treated soil within eight months of application may result in crop injury. If replanting is required, because of an early crop failure, the planting of onions, seeded melons, potatoes, tomatoes, eggplants or peppers at this time may result in crop injury. However, all crops on this label may be planted following harvest of Dacthal treated crop.

Any application of Dacthal should be made prior to weed seed germination.

USE PRECAUTIONS

Do not feed treated foliage to livestock or graze treated areas. Applied according to directions and under conditions favorable to good plant growth, 10% Dacthal Granules will not harm crops for which its use is recommended; however, conditions such as high salt concentration, seedling disease, cold weather, deep planting, excessive moisture or drought may



injure or weaken crops normally tolerant to 10% Dacthal Granules thereby increasing the possibility of herbicide damage. Under any of these conditions, one or more of the following may result, delayed crop development, reduced yields or reduced quality.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Ornamental Turf: Apply uniformly to established turfgrass at 100 lbs. 10% Dacthal Granules per acre in the early spring before crabgrass and other annual grasses and broadleaf weed seeds germinate. Crabgrass seed germination usually coincides with the time Forsythia blossoms start to fall. One application in early spring before weed seed germination usually provides season long control. In areas which commonly experience stands of late-germinating crabgrass and other annual weedy grasses, a second application at half the regular rate can be safely made two months after the first application. To control annual bluegrass (*Poa annua*) and other erratic or later-germinating grasses and weeds in northern states, supplement the early spring application of 10% Dacthal Granules with an application of 150 lbs. 10% Dacthal Granules in late summer or early fall before weed seed germination. Earlier applications are required in southern United States. Consult agricultural experiment station or extension service weed specialist for date *Poa annua* seeds germinate in your area and make application at least two weeks prior to this date.

Early spring application of 10% Dacthal Granules may be made to new turfgrass seedlings after the grasses have exhibited a uniform greening and the grass is preferably 1 to 2 inches in height.

Where some spring seeding is necessary, there should be a delay of approximately 60 days after application of 10% Dacthal Granules. This delay increases the survival of desirable grasses. Fall seeding of permanent grasses may follow a single application made either in early spring up to not less than 60 days of seeding.

10% Dacthal granules is not recommended for use on putting-greens. 10% Dacthal is not recommended on bentgrasses when mowed at putting-green heights. Do not apply to Dichondra.

Flower Gardens: Apply after establishment of bed and conditions are favorable for good plant growth, or as a supplemental application of 90 lbs. 10% Dacthal Granules per acre. Where possible the bed should be established and application made early in the spring. Delayed or secondary applications, when needed, can be made at any time provided beds have been cultivated and are free of weeds. Weed control up to three months or more may be expected following proper application. See list of ornamentals.

Nursery Stock or Ornamental Plantings: Apply at lining-out, late fall or early spring at 90 lbs. 10% Dacthal Granules per acre. Applications should be made to soil recently cultivated to a uniform texture. These can be made immediately following lining-out of stock. With established plantings, application should be made following proper cultivation to remove existing weeds. Where possible this should be done early in the spring. Late summer applications may prove beneficial for control of fall-germinating weeds, if made following cultivation. Weed control up to three months or more may be expected following proper application. 10% Dacthal Granules is specifically recommended for weed control on the following nursery and ornamental plantings:

Abelia
 Ageratum
 Ajuga
 Alyssum
 Andromeda, Jap.
 Arborvitae
 Ash
 Aster
 Azalea
 Babysbreath
 Barberry
 Bellflower
 Birch
 Bleedingheart
 Bloodleaf
 Boxwood
 Bugloss
 Camellia
 Candytufts
 Chestnut
 Chrysanthemum
 Cinquefoil
 Coleus
 Columbine
 Coneflower, purple
 Coreopsis
 Coralbells
 Cosmos
 Cotoneaster
 Cottonwood
 Crabapple
 Cuphea
 Cypress
 Dahlia
 Daisy
 Delphinium
 Deulzia
 Dogwood
 Elaeagnus
 Elm
 Euonymus
 Evening Primrose
 Feverfew
 Fir
 Forget-me-not

Forsythia
 Four-O'Clock
 Foxglove
 Gallardia
 Geranium
 Gladiolus
 Golddust
 Goldentuft
 Ground-hemlock
 Gum
 Hawthorn
 Heath, pink
 Holly
 Hydrangea
 Honeysuckle
 Iris
 Ivy
 Juniper
 Lantana
 Larkspur, candle
 Lavendercotton
 Ligustrum
 Lilac
 Lily
 Loblolly pine
 Locust
 Lupine
 Magnolia
 Maple
 Marguerite, golden
 Marigold
 Mockorange
 Morningglory
 Moss, rose
 Mother-of-thyme
 Mountain Laurel
 Mourning Bride
 Multiflora rose
 Nasturtium
 Oak
 Orpine
 Pachistima

Pachysandra
 Peony
 Petunia
 Pine
 Pittosporum
 Podocarpus
 Poker plant
 Poplar
 Privet
 Privet, varigated
 Redbud
 Rhododendron
 Rose
 Russian olive
 Sage, scarlet
 Salvia
 Scabiosa
 Snapdragon
 Spiderwort, VA.
 Spirea
 Spruce
 Stonecrop
 Strawflower
 Sundrops
 Sunflower
 Sweet pea
 Sycamore
 Tea roses, hybrid
 Thyme, creeping
 Torch lily
 Tree peony
 Tulip tree
 Verbena
 Viburnum
 Violet
 Wallflower
 Walnut
 Welgela
 Willow
 Wormwood
 Yarrow
 Yellow fernleaf
 Yew
 Zinnia

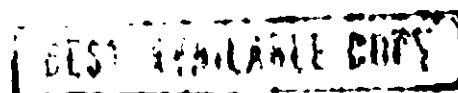
Do not use on the following plants:

Bugleweed
 Buttonpink
 Carnation

Geum
 Germander
 Mesembryanthemum
 Pansy

Phlox
 Sweet William
 Telanthera

Note: See General Information to determine proper rate for your weed complex.



Broccoli, Brussels sprouts, Cauliflower, Cabbage: Apply uniformly to the soil at seeding or transplanting at 80 to 105 lbs. 10% Dacthal Granules per acre. Application can be applied directly over transplants without injury. If weeds have emerged, crops should be clean cultivated or weeded prior to application.

Beans (dry or snap), Southern peas (blackeyed), Soybeans: Apply uniformly to the soil at time of seeding at 80 to 105 lbs. 10% Dacthal Granules per acre.

Seeded Cucumbers, Squash (winter and summer), Melons (cantaloupe, watermelon, honeydew): Apply uniformly to the soil at 80 to 105 lbs. 10% Dacthal Granules per acre when plants have 4 to 5 true leaves, are well established and growing conditions are favorable for good plant growth. Crops should be cultivated or weeded prior to application if weeds have emerged.

Collards, Kale, Mustard greens, Turnips (greens and roots): Apply uniformly to the soil at 80 to 105 lbs. 10% Dacthal Granules per acre at time of seeding.

Garlic and Onions: Apply uniformly to soil at seeding or transplanting and/or at layby at 80 to 105 lbs. 10% Dacthal Granules per acre. Application can be made directly over transplants without injury. A layby application can be made on onions up to 14 weeks after seeding or transplanting; on garlic, layby application can be made when the crop plant has 3 to 5 true leaves. Should weeds emerge prior to layby, the crop should be cultivated or weeded before application.

Horseradish: Apply uniformly to the soil at time of planting at 80 to 105 lbs. of 10% Dacthal Granules per acre. Preplant incorporation is not recommended.

Potatoes (whole or cut pieces): Apply uniformly to the soil at 80 to 105 lbs. 10% Dacthal Granules per acre at planting, drag-off or layby. If top of beds are to be dragged off, make application after drag-off. Layby application can be made up to 9 weeks after planting. If weeds have emerged at layby, the crop should be cultivated prior to application. The initial sprinkler irrigations should not exceed one inch. 10% Dacthal Granules is not recommended for use on potatoes in California.

Sweet Potatoes and Yams: Apply uniformly to the soil at 80 to 105 lbs. 10% Dacthal Granules per acre at time of transplanting or layby. Application can be made directly over transplant without injury. Layby application can be made up to 6 weeks after transplanting. If weeds have emerged, the crop should be cultivated or weeded prior to application.

Strawberries: New plantings - Apply uniformly to soil at 90 lbs. per acre at time of transplanting. Established plantings - Apply in early fall and early spring at rate of 80 to 90 lbs. per acre to control fall and early spring germinating weeds. Do not apply after first bloom through harvest. These applications can be made directly over plants without injury.

STORAGE AND DISPOSAL

STORAGE: Store in a dry place. 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. Open dumping is prohibited.

CONTAINER DISPOSAL: Completely empty bag into application equipment and dispose of empty bag in a sanitary landfill, or by incineration; or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND LIMITATION OF DAMAGES

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of Fitness or of Merchantability, and no agent of Seller is authorized to do so except in writing with a specific reference to this warranty. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.