

228-186

7/13/2004

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND
TOXIC SUBSTANCES

JUL 13 2004

Mr. Russell F. Sawyer
Nufarm Americas Inc.
1333 Burr Ridge Parkway,
Suite 125A
Burr Ridge, IL 60527-0866

Dear Mr. Sawyer:

Subject: Conversion from 2,4-DP to 2,4-DP-p
Riverdale 1D + 1DP Low Vol
EPA Registration Number: 228-186
Your Amendment Application
Submission Dated March 1, 2004

The Agency is conditionally approving an amendment to the registration of the above-referenced product under the authority of section 3(c)(7)(A) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Under this amendment the Agency is approving the conversion of the active ingredient dichlorprop from its racemic form [2-ethylhexyl ester of 2-(2,4-dichlorophenoxy)propionic acid, or applicable salt thereof] to its single isomer form [2-ethylhexyl ester of (+)-R-2(2,4-dichlorophenoxy)propionic acid, or applicable salt thereof]. The revised labeling and Confidential Statement(s) of Formula submitted in support of the conversion are acceptable with the following provisions:

1. This acceptance is based on your certification that no changes have been made to the Confidential Statement(s) of Formula (CSF) or the product labeling other than those specified within the body of your certification statement. No other revisions are being reviewed or considered with this action.
2. You may sell or distribute product containing the racemic form of dichlorprop and bearing the previously approved labeling for 18 months from the date of this letter.

A copy of the revised Confidential Statement of Formula (Basic, Alternative #1, Alternative #2, and Alternative #3 Formulation, dated 03/01/04) has been placed in the Agency's file for the subject product. The basic and alternative CSFs supersede all previously submitted CSFs for this product.

A stamped copy of the labeling is enclosed for your records. Submit one copy of your final printed labeling before you release the product for shipment.

Sincerely yours,

JSI

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosures

3 7 15

ACCEPTED

JUL 13 2004

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

228-186

(Residential Label)

RIVERDALE®

1D + 1DP-p LOW VOL

A WOODY PLANT HERBICIDE FOR CONTROLLING MIXED BRUSH. ALSO CONTROLS NOXIOUS PERENNIAL WEEDS ON NON-CROP LAND, AND RESTRICTED TURF AREAS

GET THE OPTICAL ADVANTAGE®

ACTIVE INGREDIENTS:

Isooctyl (2-ethylhexyl) Ester of 2,4-Dichlorophenoxyacetic Acid*	16.05%
Isooctyl (2-ethylhexyl) Ester of (+)-R-2-(2,4-Dichlorophenoxy) propionic Acid**†	8.05%
INERT INGREDIENTS:***	75.90%
TOTAL	100.00%

Isomer Specific by AOAC Method

- *2,4-Dichlorophenoxyacetic Acid Equivalent 10.6%, 0.78lbs./gal.
- ** (+)-R-2-(2,4-Dichlorophenoxy)propionic Acid Equivalent 5.4%, 0.40lbs./gal.
- ***This product contains Petroleum Distillate
- †CONTAINS THE SINGLE ISOMER FORM OF DICHLORPROP-p

Riverdale and The Optical Advantage are Registered Trademarks of Nufarm Americas Inc.

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE SIDE PANELS FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS 16 FL. OZ. (1 Pint)

EPA REG. NO. 228-186

EPA EST. NO. 228-IL-1

MANUFACTURED BY NUFARM AMERICAS INC., BURR RIDGE, ILLINOIS 60527-0866

- Revised 3/7/03 Revised First Aid per PR 2001-1 and Disposal per PR 2001-6 via Amendment.
- 6/13/03 Corrected Ornamental Sites per EPA's Request 5/28/03 Meeting.
- 1/5/04 Added marketing hype which will allow for dye to be incorporated in CSF. Residential label only.
- 3/1/04 Converted Dichlorprop to Optical Isomer via Amendment.

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

Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or clothing. Avoid breathing vapors or spray mist. When using this product, wear long-sleeved shirt, long pants, socks, shoes and chemical resistant gloves. 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 before eating or smoking. Remove saturated clothing as soon as possible and shower. The maximum number of broadcast applications to turf per treatment site is 2 per year. Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried. If this container is over one gallon and less than five gallons, then persons engaged in open pouring of this product must also wear coveralls or a chemical-resistant apron. If this container is five gallons or more in capacity, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

FIRST AID STATEMENT

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

- 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 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- IF ON SKIN OR CLOTHING:** 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:**

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. Drift or run-off may adversely affect aquatic invertebrates and non-target plants. Do not apply directly to water. When cleaning equipment, do not pour washwaters on the ground, spray or drain over a large area away from wells and other water sources. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system. Do not contaminate irrigation ditches or water used for domestic purposes. If spills occur, collect the material and dispose of by following disposal instructions on this label. Use care to avoid spray contact or drift to 2,4-D or 2,4-DP susceptible plants such as okra, cotton, tomatoes, flowers, grapes, fruit trees, vegetables and ornamentals. Do not permit spray mist containing this product to drift onto them since even very small quantities of the spray, which may not be visible, can cause severe injury during both growing and dormant periods. Do not spray when the wind is blowing towards susceptible crops or ornamental plants. Use coarse sprays to minimize drift. Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and 2,4-DP have been associated with mixing/loading and disposal sites.

Caution should be exercised when handling these pesticides at such sites to prevent contamination of groundwater supplies.

Use of closed systems for mixing and transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

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.

BRUSH CONTROL: RIVERDALE 1D + 1DP-p LOW VOL is specifically designed to control woody plants in all residential areas. This product also controls many noxious perennial weeds on uncropped land. The following is a partial list of the weeds controlled: Alder, Ash, Aspen, Birch, Blackberry, Black cherry, Blackjack oak, Black locust, Box elder, Brambles, Buckbrush, Ceanothus, Chamise, Coffeeberry, Currant, Elderberry, Fir, Gooseberry, Greenbrier, Gum, Hemlock, Honeysuckle, Locust, Manzanita, Maple, Multifloral rose, Oaks, Osage orange, Palmetto, Pine, Poison ivy, Poison oak, Poplar, Red elder, Red elm, Salmonberry, Sand sagebrush, Serviceberry, Shinnery oak, Snowberry, Spruce, Sumac, Sycamore, Tulip poplar, Wild cherry, Wild grape, Wild rose, Winged elm, Yerba santa, and many other species.

TO PREPARE SPRAY: Add one-half the required amount of water to the spray tank, then add this product with agitation and finally the balance of the water with continued agitation. This material forms an emulsion in water, not a solution. This tends to separate on standing. Provide agitation to prevent such separation and ensure a uniform mixture.

FOLIAGE STEM TREATMENT: Use as a spray on thick brush composed of mixed species. Apply to both stems and foliage from the time foliage is completely matured until the plants start to go dormant. All leaves, stems and suckers must be completely wet to the ground line for effective control. Some regrowth may be anticipated on the more resistant species, such as oak, maple, ash and persimmon. Add $\frac{3}{4}$ to 1 pint of RIVERDALE 1D + 1DP-p to 4 gallons of water using $\frac{8}{3}$ to 25 gallons of spray mixture per 1800 square feet, depending upon the height and thickness of the brush. Mix thoroughly before spraying.

SPOT TREATMENT: For spot spraying with backpack sprayer, mix 2 cups (16 oz.) RIVERDALE 1D + 1DP-p with 5 gallons of water. Wet brush stems and foliage thoroughly.

MODIFIED BASAL TREATMENT: Drench the base of plants, then wet the lower $\frac{4}{5}$ of remaining stems and leaves thoroughly to runoff. Apply treatment when brush is in full foliage. This method can be applied where susceptible species have been controlled by prior sprays and more resistant species, such as maple and oak remain. Soaking the base of the plant and wetting all stems to runoff is absolutely necessary for complete control.

CONCENTRATE STUMP TREATMENT: For small (up to 3 inch diameter) stems, cut them as close to the ground as possible and apply undiluted RIVERDALE 1D + 1DP-p directly from the can to the surface of the freshly cut stump.

TURF CONTROL: RIVERDALE 1D + 1DP-p LOW VOL is recommended for control of broadleaf weeds in Residential Turf areas. This treatment may injure bentgrass, St. Augustinegrass, centipede grass, carpetgrass and newly seeded lawns. If necessary to control weeds in such turf, use half the recommended rate in chart and repeat application in 2 to 3 weeks. Do not apply to Lippia, Dichondra and where desirable Clovers are present nor on bentgrass greens and tees as severe turf injury may result. Do not use this product to control weeds in flower and vegetable beds, shrubs and ornamental plantings. Spray when air is calm to avoid spray drift that might injure nearby desirable plants. A separate sprayer should be kept for killing weeds as 2,4-D and related chemicals are difficult to clean from equipment.

The following is partial list of weeds controlled in turf by RIVERDALE 1D + 1DP-p:

MORE SUSCEPTIBLE WEEDS

- | | | |
|-------------------|----------------|------------------------|
| Black medic | Dandelion | Little starwort |
| Buttercup | *English daisy | Oxalis (woodsorrel) |
| Chickweed | Ground ivy | Plantain (narrow |
| (common mouseear) | Healall | or buckhorn broadleaf) |
| Clover | Henbit | *Spurge |
| Cudweed | Knotweed | |

*Treat in Spring and again in Fall.

LESS SUSCEPTIBLE WEEDS

- | | | |
|------------------|--------------|--------------|
| Bindweed | Kochia | Vervain |
| Dock | Lambsquarter | Vetch |
| Evening primrose | Mallow | Violet |
| Falsedandelion | Pigweed | Wild carrot |
| Florida pusley | Poorjoe | Wild lettuce |
| | Ragweed | |

This product is NOT effective on perennial veronicas or on weed grasses.

PREPARATION OF THE SPRAY: Fill the spray tank with half of the required amount of water, then add the recommended amount of RIVERDALE 1D + 1DP-p herbicide with agitation and finally the balance of water with agitation.

Apply any time broadleaf weeds are growing actively. Dandelion, plantain, woodsorrel and clovers are best treated in the Fall or in Spring before flower heads develop. Winter weeds such as Chickweeds and Henbit should be treated in early Spring.

LAWNS: Summer weeds such as oxalis, knotweed and spurge should be sprayed when they are small. In areas with extended growing seasons, such as California, treatment in both Spring and Fall may be needed to control more resistant species.

Lawns to be over-seeded in the Fall should be treated at least 4 weeks before the planned seeding date. Rainfall (1/4 inch or more) or irrigation should follow treatments. Fall-seeded lawns may be treated the following Spring. Spring-seeded lawns may be treated after the grasses have sprouted and been cut at least twice, generally 6 to 10 weeks after seeding, depending on germination and growth rate.

FOR ESTABLISHED LAWNS: Fall treatment fits into a good turf management program. Proper fertilization and mowing should be combined with chemical weed control to thicken the turf after the weeds have died and to discourage more weeds from invading.

HOSE ATTACHED SPRAYERS (LAWN MODELS): Use 3 tablespoons of RIVERDALE 1D + 1DP-p herbicide diluted with water to the 3 to 5 gallon mark on the sprayer jar for each 500 square feet (25' x 20') of lawn area to be sprayed. Adjust water pressure so that spray streams about 10 to 15 feet with no misting.

AMOUNTS TO USE

Riverdale 1D + 1DP-p	Area Covered	Volume
3 ounces	1,000 square feet	1 gallon
1 pint	5,000 square feet	5 gallons

STORAGE AND DISPOSAL

STORAGE: To be stored in original container and placed in an area inaccessible to children.

DISPOSAL: **If empty** - Do not reuse this container. Place in trash or offer for recycling if available. **If partly filled** - If product cannot be used as directed, call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor (including toilet) or outdoor (including sewer) drain.

NOTE: Local conditions and application regulations vary and may affect use of this herbicide. Consult local Agricultural Experiment Station or Extension Service weed specialist and State regulatory agencies for recommendations in your area.

WARRANTY

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. (RV 030104)

Optional Text:

Contains "See Spray" A temporary blue marker dye, so you can see where you've sprayed
Rainfast in 3 hours
SYSTEMIC ACTION kills to the root
Controls Dozens of Weeds

ACCEPTED

JUL 13 2004

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

228-186

8/15

(COMMERCIAL LABEL)

RIVERDALE®

1D + 1DP-p LOW VOL

A WOODY PLANT HERBICIDE FOR CONTROLLING MIXED BRUSH ON UTILITY RIGHTS-OF-WAY, HIGHWAYS, DRAINAGE DITCHBANKS, FENCE ROWS AND SOLID STANDS OF OAK OR ELM. CONTROLS NOXIOUS PERENNIAL WEEDS ON NON-CROPLAND.

ALSO CONTROLS NOXIOUS PERENNIAL WEEDS ON UNCROPPED LAND, LAWNS, GOLF COURSES, ATHLETIC FIELDS, PARKS, AND OTHER ORNAMENTAL TURF GRASS AREAS. GET THE OPTICAL ADVANTAGE®

ACTIVE INGREDIENTS:

Isooctyl (2-ethylhexyl) Ester of 2,4-Dichlorophenoxyacetic Acid*	16.05%
Isooctyl (2-ethylhexyl) Ester of (+)-R-2-(2,4-Dichlorophenoxy) propionic Acid**‡	8.05%
INERT INGREDIENTS:***	75.90%
TOTAL	100.00%

Isomer Specific by AOAC Method

*2,4-Dichlorophenoxyacetic Acid Equivalent	10.6%, 0.78lbs./gal.
**(+)-R-2-(2,4-Dichlorophenoxy)propionic Acid Equivalent	5.4%, 0.40lbs./gal.

***This product contains Petroleum Distillate
‡CONTAINS THE SINGLE ISOMER FORM OF DICHLORPROP-p

Riverdale and The Optical Advantage are Registered Trademarks of Nufarm Americas Inc.

KEEP OUT OF REACH OF CHILDREN

CAUTION - CAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

SEE SIDE PANELS FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS GALS.

EPA REG. NO. 228-186

EPA EST. NO. 228-IL-1

MANUFACTURED BY NUFARM AMERICAS INC., BURR RIDGE, ILLINOIS 60527-0866

NOTE: Spanish language is optional

Revised 3/7/03 Revised First Aid per PR 2001-1 via Amendment.
6/13/03 Corrected Ornamental Sites per EPA's Request 5/28/03 Meeting.
3/1/04 Converted Dichlorprop to Optical Isomer via Amendment.

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

CAUTION - CAUCION

Harmful if swallowed or absorbed through skin. Avoid inhalation of vapors or spray mist and contact with eyes, skin, or clothing. If this container is over one gallon and less than five gallons, then persons engaged in open pouring of this product must also wear coveralls or a chemical-resistant apron. If this container is five gallons or more in capacity, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

NON-WPS TURF USES: Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) -- in general, only agricultural plant uses are covered by the WPS -- must wear: long pants, long-sleeved shirt, socks, shoes and chemical resistant gloves. 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. The maximum number of broadcast applications to turf per treatment site is 2 per year.

NON-WPS INDUSTRIAL USES: When mixing, loading or applying this product or repairing or cleaning equipment used with this product, wear eye protection, (face shield or safety glasses), chemical resistant gloves, long-sleeved shirt, long pants, socks and shoes. It is recommended that safety glasses include front, brow and temple protection. For aerial applicators in an enclosed cockpit and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required. Wash hands, face and arms with soap and water as soon as possible after mixing, loading or applying this product. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry.

WPS USES: Personal Protective Equipment - Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selection chart. Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) -- in general, agricultural plant uses are covered -- must wear: long-sleeved shirt and long pants; chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber \geq 14 mils, Neoprene Rubber \geq 14 mils, and Viton \geq 14 mils; shoes plus socks; and protective eyewear. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing of PPE must not be reused until it has been cleaned. If this container is over one gallon and less than five gallons, mixers and loaders who do not use a mechanical system (such as a probe and pump or spigot) to transfer contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

Engineering Controls Statements: If this container is five gallons or more in capacity, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used 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.

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.

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. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID STATEMENT

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

- 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 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- IF ON SKIN OR CLOTHING:** 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: Contains petroleum distillate - vomiting may cause aspiration pneumonia.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. Drift or run-off may adversely affect aquatic invertebrates and non-target plants. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. When cleaning equipment, do not pour washwaters on the ground, spray or drain over a large area away from wells and other water sources. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system. Do not contaminate irrigation ditches or water used for domestic purposes. If spills occur, collect the material and dispose of by following disposal instructions on this label. Use care to avoid spray contact or drift to 2,4-D or 2,4-DP susceptible plants such as okra, cotton, tomatoes, flowers, grapes, fruit trees, vegetables and ornamentals. Do not permit spray mist containing this product to drift onto them since even very small quantities of the spray, which may not be visible, can cause severe injury during both growing and dormant periods. Do not spray when the wind is blowing towards susceptible crops or ornamental plants. Use coarse sprays to minimize drift. Spray drift can be lessened by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by using 20 pounds spraying pressure with flat fan or flooding flat fan nozzle tips; by spraying when wind velocity is low; and, by stopping all spraying when wind exceeds 6 to 7 miles per hour. Do not apply with hollow cone-type insecticide or other nozzles that produce a fine droplet spray. Do not use in greenhouses. Do not use the same spray equipment for applying other materials to 2,4-D susceptible crops as injury may result.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and 2,4-DP have been associated with mixing/loading and disposal sites. Caution should be exercised when handling these pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing and transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

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 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 Worker 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 12 hours.

PPE is 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, chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber \geq 14 mils, Neoprene Rubber \geq 14 mils, and Viton \geq 14 mils; shoes plus socks, and protective eyewear.

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.

For Turf use, do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

BRUSH CONTROL

RIVERDALE 1D + 1DP-p LOW VOL is specifically designed for utilities and other industrial users to control woody plants. This product also controls many noxious perennial weeds on uncropped land, such as along highways, drainage ditchbanks and fence rows. The following is a partial list of the weeds controlled: Alder, Ash*, Aspen, Birch, Blackberry, Black cherry, Black jack oak, Black locust, Box elder, Brambles, Buckbrush, Ceanothus, Chamise, Coffeeberry, Currant, Dewberry, Dogwood, Elderberry, Elms, Fir, Gooseberry, Greenbrier, Gum, Hazel, Hemlock, Hickory, Honeysuckle, Kudzuvine, Locust, Manzanita, Maples*, Multifloral rose, Oaks, Osage orange, Palmetto, Persimmon*, Pine, Poison ivy, Poison oak, Poplar, Raspberry, Red elder, Salmonberry, Sand sagebrush, Sassafras, Serviceberry, Shinnery oak, Snowberry, Spicebush, Spruce, Sumac, Sweetgum, Sycamore, Tulip poplar, Virginia creeper, Wild cherry, Wild grape, Wild rose, Willow, Winged elm, Yerba santa, and many other species.

*Best controlled by stump or basal treatment.

TO PREPARE SPRAY: Add one-half the required amount of oil (kerosene, diesel or fuel oil) or water to the spray tank, then add this product with agitation and finally the balance of the water or oil with continued agitation. This material forms an emulsion in water not a solution. This tends to separate on standing. Provide agitation to prevent such separation and ensure a uniform mixture. If this material is to be used in straight oil mixtures, do not let water get into it or the finished mixture.

Note: Water and a surfactant (spreader sticker) may be substituted in amounts equal to recommended amounts of oil.

FOLIAGE STEM TREATMENT: This is the standard method for high-volume sprays along fence rows, highways and rights-of-way. Use as a spray on thick brush composed of mixed species. Apply to both stems and foliage from the time foliage is completely matured until the plants start to go dormant. All leaves, stems and suckers must be completely wet to the ground line for effective control. Some regrowth may be anticipated on the more resistant species, such as oak, maple, ash and persimmon. Add 1-3/4 to 3 gallons of RIVERDALE 1D + 1DP-p to 100 gallons of water using 200 to 600 gallons of spray mixture per acre (optional: 2/3 to 1 pint of Riverdale 1D + 1DP-p to 4 gallons of water using 8-1/2 to 25 gallons of spray mixture for 1,800 square feet), depending upon the height and thickness of the brush. Mix thoroughly before spraying.

SPOT TREATMENT: For spot spraying with backpack sprayer, mix 2 cups (16 oz.) of RIVERDALE 1D + 1DP-p with 5 gallons of water. Wet brush stems and foliage thoroughly.

BASAL BARK TREATMENT: Thoroughly wet the base and root collar of all stems until the spray accumulates around the root collar at the ground line. This spray may be applied during any season. Use RIVERDALE 1D + 1DP-p for basal bark treatment on scattered brush or as a second spray application on species resistant to first foliage application. Mix 6 to 8 gallons of RIVERDALE 1D + 1DP-p in 100 gallons of oil. Apply with a low volume sprayer or power equipment. Application rate will depend on species present, season applied and volume of spray used. Use a coarse spray to avoid drift.

MODIFIED BASAL TREATMENT: Drench the base of plants, then wet the lower 4/5 of remaining stems and leaves thoroughly to runoff. Apply treatment when brush is in full foliage. This method can be applied where susceptible species have been controlled by prior sprays and more resistant species, such as maple and oak remain. Soaking the base of the plant and wetting all stems to runoff is absolutely necessary for complete control.

EARLY SEASON SPRAYING: Add 2 to 3 gallons of RIVERDALE 1D + 1DP-p to 10 gallons of diesel oil and thoroughly mix. Add this mixture to 89 gallons of water.

DURING DRY WEATHER OR THE LATTER PART OF SPRAYING SEASON: Add 3 gallons of RIVERDALE 1D + 1DP-p to 15 gallons of diesel oil and mix thoroughly. Add mixture to 83-1/2 gallons of water and agitate thoroughly before use to ensure uniform mixing. DO NOT allow mixture to stand more than 1 hour after mixing.

CUT SURFACE TREATMENT - STUMPS: This treatment may be used any time of the year; however, it is more effective when applied as quickly as possible after trees are cut. Spray the entire stump, especially exposed roots and bark. A complete soaking is essential for effective control. Use this procedure after original or capital removal. It is the first step towards a chemical brush control program on newly cleared highways and rights-of-way. The spray is most effective and profitable on stumps 3 to 4 inches and larger. Mix 6 to 9-1/2 gallons of RIVERDALE 1D + 1DP-p in 100 gallons of oil. Application should be made with a low volume knapsack sprayer using a solid cone-shaped nozzle medium orifice or a sprinkler can.

CONCENTRATE STUMP TREATMENT: For small (up to 3 inch diameter) stems, cut them as close to the ground as possible and apply undiluted RIVERDALE 1D + 1DP-p directly from the can to the surface of the freshly cut stump.

FRILL: Make a frill using an axe to cut overlapping V-shaped notches in a continuous ring, and cut around the trunk near its base. Cut through the bark, but do not remove the chips. This method is recommended for all trees 5 to 6 inches in diameter and larger. Freshly cut frills can be treated anytime of the year. Mix 6 to 9-1/2 gallons of RIVERDALE 1D + 1DP-p in 100 gallons of oil (optional: 1 pint of Riverdale 1D + 1DP-p in 2 gallons of oil). Pour in as much of the mixture as the frills will hold without wasting the chemical.

POWERED KNAPSACK BASAL SPRAY: Mix 16 to 28 gallons of RIVERDALE 1D + 1DP-p with fuel oil or kerosene to make 100 gallons of spray solution. Apply with a portable knapsack mistblower to lower brush stems. Apply spray to all sides of stems; good root collar coverage is essential. Run knapsack mistblower at 1/4 to 1/3 throttle for best spray delivery and coverage. For maximum drift control, use a basal nozzle attachment. Do not raise spray nozzle above horizontal position.

FENCE ROW APPLICATION: To control mixed brush, perennial and annual broadleaf weeds, use one of the application methods such as the foliage stem method described on this label. Some regrowth may be expected on resistant species such as ash, maple, oak and persimmon.

LOW VOLUME STEM FOLIAGE SPRAY - AERIAL OR GROUND: Apply the spray only through equipment designed to provide effective drift control.

MIXED BRUSH - UTILITY RIGHTS-OF-WAY: For aerial application to solid stands of brush, use 4 to 8 quarts in 3 to 12 gallons volume per acre. 1 to 4 quarts of fuel oil may be included in this mixture.

SOLID STANDS OF OAK OR ELM: Apply with fixed-wing or helicopter aircraft. Apply in the Spring after hardwoods have just developed full sized leaves. The spray season normally runs from early May to mid-June in Texas and California, and from early May to early July in Oklahoma and Northward. Spray when wind velocities are less than 5 miles per hour.

Brush	1D + 1DP-p	Oil	Add Water to Make Total
post, blackjack oak and winged elm	1-1/3 gallon	1 gallon	5 gallons
sand shinnery oak	1 to 2 quart	1 gallon	3 gallons

For maximum control, use higher rate and repeat spray the second year using 2 quarts of RIVERDALE 1D + 1DP-p per acre.

FORESTRY SITE PREPARATION: To reduce competition from mixed trees and brush before planting forest trees, apply 2 gallons of RIVERDALE 1D + 1DP-p for easy-to-control species such as alder, aspen, hazel, sassafras, sumac, black locust, willow, and other similar species. Apply 4 gallons of RIVERDALE 1D + 1DP-p to control more difficult species such as oaks, sweet gum, black gum, hickory and tulip-poplar.

Mix with water to make 10 gallons total solution when applying as an aerial spray or 20 gallons total solution when applying as a ground spray. Do not apply to established plantations as this spray mix will injure planted conifers.

PINE RELEASE: To control hardwood brush and release Northern conifers such as red pine, Jack pine, white pine, and white spruce.

Apply 4 to 8 quarts of RIVERDALE 1D + 1DP-p as a broadcast spray in 10 gallons of water per acre. Make applications in midsummer after pine height growth is complete and the conifer buds are set. RIVERDALE 1D + 1DP-p will control aspen, birch, cherry, alder, hazel, oaks, and similar species. RIVERDALE 1D + 1DP-p will not, at these rates, provide satisfactory control of red maple, sugar maple or ash.

RIVERDALE 1D + 1DP-p AND BANVEL HERBICIDE® MIXTURES

HIGH VOLUME STEM FOLIAGE SPRAY - Mix 3 gallons of RIVERDALE 1D + 1DP-p with 1 to 2 quarts of Banvel 4WS per 100 gallons total spray mix. Use the low rate for easy to kill brush such as alders, aspen, cherry, sycamore, tulip-poplar, and willows. Use the high rate to control species such as oak, ash, elm, pines, spruce, and fir.

LOW VOLUME STEM FOLIAGE SPRAY: Aerial or Ground - Mix 4 to 6 gallons of RIVERDALE 1D + 1DP-p with 1 to 1-1/2 gallons Banvel herbicide in 15 to 50 gallons of water per acre to control mixed brush including conifers and ash.

Observe all restrictions, precautions and limitations on the labeling of each product used in tank mixture.

TURF CONTROL

Lawns and other ornamental turf grass areas - RIVERDALE 1D + 1DP-p LOW VOL is recommended for professional weed control of broadleaf weeds in Ornamental Turf Lawns (Residential, Industrial and Institutional), Parks, Cemeteries, Athletic Fields and Golf Courses (Fairways, Aprons, Tees and Roughs) and similar turf areas. This treatment may injure bentgrass, St. Augustinegrass, centipedegrass, carpetgrass and newly seeded lawns. If necessary to control weeds in such turf, use half the recommended rate in chart and repeat application in 2 to 3 weeks. Do not apply to Lippia, Dichondra and where desirable clovers are present nor on bentgrass greens and tees as severe turf injury may result. Do not use this product to control weeds in flower and vegetable beds, shrubs and ornamental plantings. Spray when air is calm to avoid spray drift that might injure nearby desirable plants. A separate sprayer should be kept for killing weeds as 2,4-D and related chemicals are difficult to clean from equipment.

The following is partial list of weeds controlled by RIVERDALE 1D + 1DP-p:

Bindweed, Black medic, Brambles, Buckhorn plantain, Bull thistle, Burdock, Buttercup, Canada thistle, Carolina geranium, Chickweed (common and mouseear), Chicory, Clover, Cocklebur, Cudweed, Dandelion, Dock, Evening primrose, False dandelion, Fleabane, Florida pusley, Frenchweed, Ground ivy, Hawkweed, Healall, Henbit, Honeysuckle, Jimsonweed, Knotweed, Kochia, Kudzu, Lambsquarter, Little starwort, Mallow, Morningglory, Mustard, Oxalis (yellow woodsorrel), Pennywort, Peppergrass, Pigweed, Plantain (narrow or buckhorn; broadleaf), Poison ivy, Poison oak, Poorjoe, Povertyweed, Purslane, Ragweed, Sheep sorrel, Shepherdspurse, Smartweed, Soliva, Sowthistle, Speedwell (annual), Spurge, Sumac, Vervain, Vetch, Violet, Wild aster, Wild blackberry, Wild carrot, Wild garlic, Wild geranium, Wild lettuce, Wild onion, Wild radish, Wild raspberry, Yarrow.

This product is not effective on perennial Veronicas or on weed grasses. Resistant weeds such as oxalis (yellow woodsorrel), Bindweed and Yarrow should be retreated whenever new growth appears. Control of difficult weeds such as Sheep (red) sorrel, Soliva, and Violets may be only partial.

PREPARATION OF THE SPRAY: Fill the spray tank with half of the required amount of water, then add the recommended amount of RIVERDALE 1D + 1DP-p herbicide with agitation and finally the balance of water with agitation. Apply any time broadleaf weeds are growing actively. Dandelion, Plantain, Wood sorrel and Clovers are best treated in the Fall or in Spring before flower heads develop. Winter weeds such as Chickweeds and Henbit should be treated in early Spring.

Summer weeds such as Oxalis, Knotweed and sparges should be sprayed when they are small. Resistant weeds such as Bindweed and Violets may require 1-1/2 gallons per 40,000 square feet and should be retreated whenever new growth appears. In areas with extended growing seasons, such as California, treatment in both Spring and Fall may be needed to control more resistant species.

On turf to be over-seeded in the Fall, treatment should be scheduled at least 4 weeks before the planned seeding date. Rainfall (1/4 inch or more) or irrigations should occur prior to seeding. Fall-seeded lawns may be treated the following Spring.

Spring-seeded lawns may be treated after the grasses have sprouted and been cut at least twice, generally 6 to 10 weeks after seeding, depending on germination and growth rate.

For established lawns, Fall treatment fits into a good turf management program. Proper fertilization and mowing should be combined with chemical weed control to thicken the turf after the weeds have died and to discourage more weeds from invading.

HOSE ATTACHED SPRAYER (LAWN MODELS): Use 3 tablespoons of RIVERDALE 1D + 1DP-p herbicide diluted with water to the 3 to 5 gallon mark on the sprayer jar for each 500 square feet (25' x 20') of lawn area to be sprayed. Adjust water pressure so that spray streams about 10 to 15 feet with no misting.

Riverdale 1D + 1DP-p	AMOUNTS TO USE Area Covered	Volume
3 ounces	1,000 square feet	1 gallon
1 pint	5,000 square feet	5 gallons
1 quart	10,000 square feet	10 gallons
1 gallon	40,000 square feet	40 gallons
1-1/2 gallons (resistant weeds)	40,000 square feet	40 gallons

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 fertilizer, seed or other pesticide. 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.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or if allowed by State and local authorities by burning. If burned, stay out of smoke.

NOTE: Local conditions and application regulations vary and may affect use of this herbicide. Consult local Agricultural Experiment Station or Extension Service weed specialists and State regulatory agencies for recommendations in your area.

WARRANTY

Seller 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.

(RV 030104)

Banvel® Herbicide - Registered Trademark of Syngenta Crop Protection.