

1068
PM 23
228-167

A WOODY PLANT HERBICIDE FOR CONTROLLING MIXED BRUSH ON UTILITY RIGHTS-OF-WAY, HIGHWAYS, DRAINAGE DITCH BANKS, FENCE ROWS AND SOLID STANDS OF OAK OR ELM. ALSO CONTROL NOXIOUS PERENNIAL WEEDS ON UNCROPPED LAND, LAWNS AND OTHER ORNAMENTAL TURF GRASS AREAS.

ACTIVE INGREDIENTS:

Isooctyl Ester of 2,4-dichlorophenoxyacetic Acid*.....	32.1%
Isooctyl Ester of 2-(2,4-dichlorophenoxy)	
Propionic Acid**.....	32.3%
INERT INGREDIENTS.....	35.7%
TOTAL.....	100.0%

*2,4-dichlorophenoxyacetic Acid Equivalent 21.3%, 1.83 lbs./gallon
 **2-(2,4-dichlorophenoxy)Propionic Acid Equivalent 21.3%
 1.87 lbs./gallon
 Isomer Specific by AOAC Method

ACCEPTED
 JUN 4 1986
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, you are advised that this pesticide is registered under EPA Reg. No. 228-167

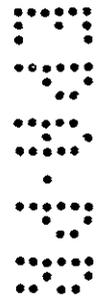
KEEP OUT OF REACH OF CHILDREN
 CAUTION
 SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS

STORAGE AND DISPOSAL

STORAGE: Always store pesticides in secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides or fungicides. 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. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. 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. 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 dispose also by incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.



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Front Panel (Continued)

ONLY FOR SALE TO, USE AND STORAGE BY LAWNCARE, LANDSCAPING PERSONNEL, AGRICULTURAL, PROFESSIONAL AND SERVICE PERSONS

E.P.A. Reg. No. 228-167 NET CONTENTS GAL. E.P.A. Est. No. 228-IL-1

MANUFACTURED BY

RIVERDALE CHEMICAL COMPANY

CHICAGO HEIGHTS, ILLINOIS 60411

LEFT SIDE PANEL

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. Remove and wash contaminated clothing before reuse. Wash thoroughly before eating or smoking.

STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention. Wash exposed skin gently with plenty of soap and water. If swallowed, DO NOT induce vomiting. If vomiting occurs spontaneously, keep airway clean. Never give anything by mouth to an unconscious person. Seek medical attention.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not contaminate irrigation ditches or water used for domestic purposes. This product is toxic to fish. Use care to avoid spray contact or drift to 2,4D or 2,4DP 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 spray per acre by using no more than 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



LEFT SIDE PANEL (CONTINUED)

fine droplet spray. Although this product is much less volatile than butyl or isopropyl esters at high temperatures (above 95°F), vapors from this product may injure susceptible plants growing nearby. Do not use in greenhouses. Flush sprayer out on a suitable non-crop area after use. Do not use the same spray equipment for applying other materials to 2,4-D susceptible crops as injury may result. Do not graze dairy animals on treated areas within 6 weeks after application. Do not graze meat animals on treated areas within 2 weeks of slaughter. 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.

DIRECTIONS FOR USE

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

BRUSH CONTROL: RIVERDALE 2D + 2DP 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 weed controlled:

Alder, Ash, Aspen, Birch, Blackberry, Black cherry, Black jack oak, Black locust, Box elder, Brambles, Buckbrush, Ceanothus, Chamise, Coffeeberry, Currant, Elderberry, Fil, Gooseberry, Hemlock, Greenbrier, Gum, Honeysuckle, Locust, Manzanita, Maple, Multifloral rose, Oak, Osage orange, Palmetto, Pine, Poison ivy, Poison oak, Poplar, Red Elder, Red elm, Red maple, Salmonberry, Sand sagebrush, Serviceberry, Shiner oak, Snowberry, Spruce, Sumac, Sycamore, Tulip poplar, Wild cherry, Wild grape, Willow, Winged elm, Yerba santa, and many other species.

RIGHT SIDE PANEL

TO PREPARE A SPRAY: Add one-half the required amount of 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. If this material is to be used in straight oil mixtures, do not let water get into it or the finished mixture. 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: This is the standard method for high-volume sprays along fence rows, highways and rights-of-way. Use as a first 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 to 1½ gallons of Riverdale 2D + 2DP to 100 gallons of water using 200 to 600 gallons of spray mixture per acre, depending upon the height and thickness of the brush. Mix thoroughly before spraying.



RIGHT SIDE PANEL (Continued)

SPOT TREATMENT: For spot spraying with backpack sprayer mix 1 cup (8 oz.) Riverdale 2D + 2DP 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 2D + 2DP for basal bark treatment on scattered brush or as a second spray application species resistant to first foliage application. Mix 3 to 4 gallons of Riverdale 2D + 2DP 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 run-off is absolutely necessary for complete control.

EARLY SEASON SPRAYING: Add 1 to 1½ gallons of Riverdale 2D + 2DP 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 1½ gallons of Riverdale 2D + 2DP to 15 gallons of diesel oil and mix thoroughly. Add mixture to 83½ gallons of water and agitate thoroughly before use to insure uniform mixing. DO NOT allow mixture to stand more than 1 hour after mixing.

REAR PANEL

(Brush Control Continued)

CUT SURFACE TREATMENT:

STUMPS: This treatment may be used anytime 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 3 to 4 gallons of Riverdale 2D + 2DP in 100 gallons of oil. Application should be made with a low volume knapsack sprayer using a solid cone-shaped nozzle medium orifice.

CONCENTRATE STUMP TREATMENT: For small (up to 3 inch diameter) stems, cut them as close to the ground as possible and apply undiluted Riverdale 2D + 2DP directly from the can to the surface of the freshly cut stump.

REAR PANEL Continued

(Brush Control Continued)

FRILL: Make a frill using an axe to cut overlapping V-shaped notches in a continuous ring, and cut around the trunk near 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 3 to 4 gallons of Riverdale 2D + 2DP in 100 gallons of oil. Pour in as much of the mixture the frills will hold without wasting the chemical.

POWERED KNAPSACK BASAL SPRAY: Mix 8 to 14 gallons of Riverdale 2D + 2DP with fuel 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 ^{ok} 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. ^{ok} 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 2 to 4 quarts in 3 to 12 gallons volume per acre. Two to 4 quarts of fuel oil may be included in this mixture. ^{ok}

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

same acid rates
as 264-222
of 2,4D & 2,4DP

If necessary, repeat spray the second year with 1 quart Riverdale 2D + 2DP per acre. For maximum control, use higher rate and repeat spray the second year using 1 quart Riverdale 2D + 2DP per acre.

FORESTRY SITE PREPARATION - To reduce competition from mixed trees and brush before planting forest trees. Apply one gallon Riverdale 2D + 2DP for easy control species such as aspen, hazel, alder, sassafras, sumac, black locust willow, and other similar species. Apply 2 gallons Riverdale 2D + 2DP 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 2-4 quarts Riverdale 2D + 2DP 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 2D + 2DP will control aspen, birch, cherry, alder, hazel, oaks and similar species. Riverdale 2D + 2DP will not, at these rates, provide satisfactory control of red maple, sugar maple or ash.

RIVERDALE 2D + 2DP and BANVEL HERBICIDE (R) MIXTURES

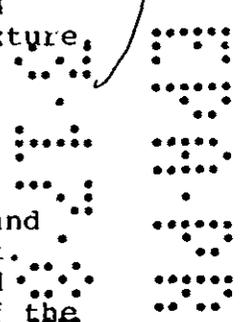
HIGH VOLUME STEM FOLIAGE SPRAY - Mix 1 gallon to 1 1/2 gallons Riverdale 2D + 2DP with 1 to 2 quarts Banvel 4WS per 100 gallons total spray mix. Use the low rate for easy to kill brush such as aslder, aspen, cherry, sycamore, tulip-poplar, and willows. Use the high rate to control species such as oak,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

LOW VOLUME STEM FOLIAGE SPRAY - Aerial or Ground - Mix 2-3 gallons of Riverdale 2D + 2DP with 1-1 1/2 gallons of Banvel herbicide in 15-50 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. (R) Banvel Herbicide - Trademark of the Velsicol Chemical Co.

TURF CONTROL

Lawns and other ornamental turf grass areas; Riverdale 2D + 2DP is recommended for control of broadleaf weeds in lawns 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 use on bentgrass greens or tees.

*new use
same acid rate
Similar to
269-222
BEA ester
2,11-D
DP*



REAR PANEL (Continued)

The following is a partial list of weeds controlled in turf by Riverdale 2D + 2DP.

MORE SUSCEPTIBLE WEEDS

Black medic	Dandelion	Little Starwort
Buttercup	*English Daisy	Oxalis (wood sorrel)
Chickweeds	Ground Ivy	Plantains (narrow
(common mousear)	Healall	or buckhorn
Clovers	Henbit	broadleaf)
Cudweed	Knotweed	*Spurge
*Treat is spring and again in fall		

LESS SUSCEPTIBLE WEEDS

Bindweed	Kochia	Vervain
Dock	Lambsquarters	Vetch
Evening Primrose	Mallow	Violet
Falsedandelion	Pigweed	Wild Carrot
Florida Pulsey	Ragweed	Wild Lettuce

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

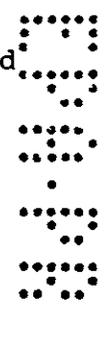
PREPARATION OF THE SPRAY: Fill the spray tank with half the required amount of water, then add the recommended amount of Riverdale 2D + 2DP herbicide any time broadleaf weeds are growing actively. Dandelion, plantain, wood sorrel and clovers are best treated in the fall or in spring before flower heads develop. Winter weeds such as chicweeds and henbit should be treated in early spring.

LAWNS: Summer weeds such as oxalis, knotweed and spurges 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 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 weeds have died and to discourage more seeds from invading.

HOSE ATTACHED SPRAYERS (LAWN MODELS): Use 1 1/2 teaspoons of Riverdale 2D + 2DP herbicide diluted with water to the 3 to 5 gallon mark on the sprayer jar for each 500 square feet (25'x20') of lawn area to be sprayed. Adjust water pressure so that spray streams about 10-15 feet with no misting.



REAR PANEL (Continued)

AMOUNTS TO USE

Riverdale 2D + 2DP	Area Covered	Water Volume
1½ oz.	1,000 sq. ft.	1 gal.
8 oz.	5,000 sq. ft.	5 gals.
1 pt.	10,000 sq. ft.	10 gals.
2 qts.	40,000 sq. ft.	40 gals.



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.

WARRANT AND LIMITATIONS 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.

