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RIVERDALE

PM 23

2D + 2DP AMINE

228-221

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. ALSO CONTROLS NOXIOUS PERENNIAL WEEDS ON NON-CROPLAND, LAWN AND OTHER ORNAMENTAL TURF GRASS AREAS.

ACTIVE INGREDIENTS:

Dimethylamine salt of 2,4-Dichlorophenoxyacetic Acid* 22.8%
Dimethylamine salt of 2-(2,4-Dichlorophenoxy)propionic Acid** 23.2%

INERT INGREDIENTS: 54.0%
TOTAL 100.0%

Isomer Specific by AOAC Method

*2,4-Dichlorophenoxyacetic Acid Equivalent 18.9%, 1.88 lbs./gallon
**2-(2,4-Dichlorophenoxy)propionic Acid Equivalent 19.5%, 1.89 lbs./gallon

KEEP OUT OF REACH OF CHILDREN

DANGER

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND STATEMENT OF PRACTICAL TREATMENT

STORAGE AND DISPOSAL

STORAGE: Always store pesticides in secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides, or fungicides. Store at temperatures above 32°F. If allowed to freeze, remix before using. This does not alter this product. 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 can not 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 also disposable by incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

EPA REG. NO. 228-EER

NET CONTENTS

GALS.

EPA EST. NO. 228-IL-1

MANUFACTURED BY

RIVERDALE CHEMICAL COMPANY

Chicago Heights, IL 60411-3699

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. May cause irreversible eye damage. Do not get in eyes or on clothing. Wear goggles or face shield. Avoid contact with skin, may cause skin irritation. Wash thoroughly with soap and water after handling. Harmful if swallowed. Avoid inhaling vapor or spray mist.

STATEMENT OF PRACTICAL TREATMENT

- IF SWALLOWED: Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Seek medical attention.
- IF IN EYES: Hold eyelids open and flush with a steady stream of water for 15 minutes. Seek medical attention.
- IF ON SKIN: Wash exposed skin gently with plenty of soap and water.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands. 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 2,4-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. 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. 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 AMINE is specifically designed for utilities and other industrial users to control woody plants. This product also controls many noxious perennial weeds on non-croplands, 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, Elderberry, Fir, Gooseberry, Greenbrier, Gum, Hemlock, 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, Shinnery oak, Snowberry, Spruce, Sumac, Sycamore, Tulip poplar, Wild cherry, Wild grape, Willow, Winged elm, Yerba santa, and many other species.

TURF CONTROL: Lawns and other ornamental turf grass areas - RIVERDALE 2D + 2DP Amine 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.

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

MORE SUSCEPTIBLE WEEDS

Black Medic	Dandelion	Little Starwort
Buttercup	*English Daisy	Oxalis (woodsorrel)
Chickweeds	Ground Ivy	Plantains (narrow
(common mouseear)	Healall	or buckhorn broadleaf)
Clovers	Henbit	*Spurge
Cudweed	Knotweed	

*Treat in 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 of the required amount of water, then add the recommended amount of RIVERDALE 2D + 2DP Amine herbicide with agitation and finally the balance of the water with agitation. This material forms a true solution in water. It does not require additional agitation after the initial thorough mixing, and does not volatilize under proper spraying conditions. 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 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 ($\frac{1}{2}$ 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 weeds have died and to discourage more seeds from invading.

HOSE ATTACHED SPRAYERS (LAWN MODELS): Use $1\frac{1}{2}$ teaspoons of RIVERDALE 2D + 2DP Amine 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 10-15 feet with no misting.

RIVERDALE 2D + 2DP AMINE	AMOUNTS TO USE	
	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.

RIVERDALE 2D + 2DP and BANVEL HERBICIDE^R MIXTURES

HIGH VOLUME STEM FOLIAGE SPRAY - Mix 1 gallon to 1½ gallons RIVERDALE 2D + 2DP Amine with 1 to 2 quarts 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 2-3 gallons of RIVERDALE 2D + 2DP Amine with 1-1½ gallons 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. ^RBanvel Herbicide - Trademark of the Velsicol Chemical Co.

WARRANTY 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 here used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions.

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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 agitation. This material forms a true solution in water. It does not require additional agitation after the initial thorough mixing, and does not volatilize under proper spraying conditions.

FOLIAGE STEM TREATMENT: This is the standard method for high-volume sprays along fence rows, highways and rights-of-ways. 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. 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 Amine 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.

SPOT TREATMENT: For spraying with backpack sprayer - mix 1 cup (8 oz.) RIVERDALE 2D + 2DP Amine 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 + 2 DP Amine for basal bark treatment on scattered brush or as a second spray application on species resistant to first foliage application. Mix 3 to 4 gallons of RIVERDALE 2D + 1 DP Amine in 100 gallons of water. 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 AND LATTER PART OF SPRAYING SEASON, AND DURING DRY WEATHER: Add 1½ gallons of RIVERDALE 2D + 2DP AMINE to 100 gallons of water and mix thoroughly.

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 Amine in 100 gallons of water. 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 Amine 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 3 to 4 gallons of RIVERDALE 2D + 2DP Amine in 100 gallons of water. 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 Amine with water 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 $\frac{1}{2}$ to $\frac{1}{3}$ 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 2 to 4 quarts in 3 to 12 gallons volume per acre.

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	Add Water to Make Total of
post, blackjack oak and winged elm	2/3 gallon	6 gallons
sand shinnery oak	1/2-1 quart	4 gallons

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

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

