

23-AUG-1999

GUARDSMAN®

2,4-D LV 600

EMULSIFIABLE CONCENTRATE

10 LITRES

AGRICULTURAL:

Low Volatile Farm and Industrial Weed Killer

Contains 2,4-D

For selective spraying of wheat, barley, rye, corn, established pastures, rangeland and turf, for the control of certain annual and perennial weeds and for woody plant growth.

WARNING

WARNING

POISON

READ THE LABEL BEFORE USING

KEEP OUT OF REACH OF CHILDREN

GUARANTEE: 2,4-D (isomer specific) 564 g/L
(present as low volatile ester)

REGISTRATION NO. 21432

PEST CONTROL PRODUCTS ACT

Notification Change

~~VAN WATERS & ROGERS LTD.~~
~~A ROYAL PAKHOED COMPANY~~
9800 VAN HORNE WAY
RICHMOND, B.C.
V6X 1W5

Univar Canada Ltd.

GUARDSMAN(R) 2,4-D LV 600 - Emulsifiable Concentrate

PRECAUTIONS

CAUSES IRRITATION OF SKIN AND EYES

DO NOT GET IN EYES.

AVOID CONTACT WITH SKIN AND CLOTHING.

FIRST AID

If swallowed: Do not induce vomiting. Get medical attention or contact a poison control centre.

If in eyes: Flush eyes with plenty of water for at least 15 minutes and get medical attention or call a poison control centre.

If on skin: Wash with soap and plenty of water.

TOXICOLOGICAL INFORMATION: Treat Symptomatically.

For further information consult the Material Safety Data Sheet.

NOTICE TO USER: This control product is to be used only in accordance with the directions on this label. It is an offence under the PEST CONTROL PRODUCTS ACT to use a control product under unsafe conditions.

NOTICE TO BUYER: Seller's guarantee shall be limited to the terms set out on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

AGRICULTURAL CHEMICAL: Do not ship or store with food, feeds, drugs or clothing.

PROTECTIVE CLOTHING AND EQUIPMENT

Handling the concentrate (mixing and loading)

Wear a long-sleeved shirt, long pants, chemical resistant gloves, socks and shoes, and protective eye wear (face shield or safety glasses). Rinse gloves before removal.

Coveralls or a chemical-resistant apron should also be worn when open pouring from containers greater than 5 L.

Handling the dilute spray solution (during application or repairing or cleaning equipment)

Wear long-sleeved shirt, long pants, chemical resistant gloves, socks and shoes. Rinse gloves before removal. Gloves are not required during application when the applicator is in an enclosed airplane cockpit.

Transfer System:

For containers larger than 20 L, use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

OPERATOR USE PRECAUTIONS

- Wear freshly laundered clothing and clean protective equipment daily.
- Rinse gloves before removal.
- Wash hands before eating, drinking, using tobacco or using the toilet.
- If herbicide penetrates clothing, remove immediately; then wash thoroughly and put on clean clothing. Throw away clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.
- After using this product, remove clothing and launder separately, and promptly and thoroughly wash hands and exposed skin with soap and water. Follow manufacturer's instructions for cleaning personal protective clothing and equipment. If no such instructions for washables are provided, use detergent and hot water. Keep and wash personal protective equipment separate from household laundry.
- After work, remove all clothing and shower using soap and water.

DISPOSAL:

1. Rinse the emptied container thoroughly and add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial

requirements.

5. For more information on the disposal of unused, unwanted product and the cleanup of spills contact the provincial regulatory agency or the manufacturer.

GUARDSMAN

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NET CONTENTS: 10 LITRES

VAN WATERS & ROGERS LTD.

9800 Van Horne Way

Richmond, B.C.

V6X 1W5

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If on skin: Wash with soap and plenty of water.

TOXICOLOGICAL INFORMATION: Treat Symptomatically. For further information consult the Material Safety Data Sheet.

AGRICULTURAL CHEMICAL: Do not ship or store with food, feeds, drugs or clothing.

STORAGE: This product must be stored away from fertilizers, seeds, insecticides, fungicides or other herbicides intended for use on 2,4-D sensitive crops.

USE: When the container is empty, triple rinse and add the rinse water to the spray tank. Care must be taken during application to avoid contaminating irrigation ditches or domestic water supplies. Avoid using sprayers which contained 2,4-D to apply other pesticides to sensitive crops.

DISPOSAL:

1. Rinse the emptied container thoroughly and add the rinsing to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
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NOTE: Local conditions may affect the use of herbicides. Provincial agricultural authorities issue recommendations to fit

local conditions. Be sure that use of this product conforms to all applicable regulations. If this product is exposed to temperatures below -20°C, it should be warmed to at least 5°C and mixed thoroughly before using.

DIRECTIONS FOR USE

PROTECTIVE CLOTHING AND EQUIPMENT

Handling the concentrate (mixing and loading)

Wear long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and protective eye wear (face shield or safety glasses). Rinse gloves before removal. Coveralls or a chemical-resistant apron should also be worn when open pouring from containers greater than 5 L.

Handling the dilute spray solution (during application or repairing or cleaning equipment)

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. Rinse gloves before removal. Gloves are not required during application when applicator is in an enclosed tractor or in an enclosed airplane cockpit.

MIXING

Transfer System

For containers larger than 20 L, use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

OPERATOR USE PRECAUTIONS

- Wear freshly laundered clothing and clean protective equipment daily.
- Rinse gloves before removal.
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separately, and promptly and thoroughly wash hands and exposed skin with soap and water. Follow manufacturer's instructions for cleaning personal protective clothing and equipment. If no such instructions for washables are provided, use detergent and hot water. Keep and wash personal protective equipment separate from household laundry.

- After work, remove all clothing and shower using soap and water.

GENERAL INSTRUCTIONS - CROP USE

GROUND APPLICATION:

Apply 50 to 200 L of spray solution per hectare depending on the type of application equipment used. Use sufficient water for even distribution. Spray at low pressures (200 to 275 kPa) when the weeds are actively growing.

AERIAL APPLICATION (including fixed and rotary wing aircraft):

Apply a minimum of 30 L of spray solution per hectare depending on the type of application system being used. Use boom pressures of 235 kPa or less. Avoid placing nozzles where spray will enter wing tip vortices.

To Prepare a Spray

Add half the required amount of water to the spray tank, then the 2,4-D LV 600 with agitation, and finally the balance of water with continued agitation.

WARNING:

If preparing straight oil mixtures, do not let water get into the product or the finished mixture.

NOTE:

This product in water forms emulsion, not a solution, which tends to separate on standing. Agitate to prevent such separation and ensure uniformity of spray mixture.

Spot Treatment

For knapsack application of 2,4-D LV 600 for spot treatment of weeds such as thistles, mix 0.2 L of product in 10 L of water. Wet all foliage thoroughly.

Selective Weed Control In Small Grains

Weeds differ in their susceptibility to 2,4-D LV 600 and not all types can be controlled satisfactorily in crops. The amount of 2,4-D LV 600 to use will depend upon the susceptibility and whether the crops will tolerate this amount. See Table 1.

Wheat, Barley and Rye

Spray from the 3-leaf expanded stage (15 cm tall) to just before

the flag-leaf (shot-blade) stage. To avoid crop injury, do not treat during boot and flowering stages. Winter wheats and fall rye should be treated in early spring, as soon as weeds appear and before the crop reaches the shot-blade stage.

Pre-Harvest Intervals

Do not permit lactating dairy animals to graze fields within 7 days after application.

Do not harvest forage or cut hay within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

Corn Postemergence:

Treat with 0.7L/ha when corn plants are 15 to 20 cm tall and most weeds have germinated but are still in seedling stage. Use drop nozzles to keep spray off corn foliage. Do not cultivate until at least 2 weeks after treatment.

Pre-Harvest Intervals

Do not permit lactating dairy animals to graze fields within 7 days after application.

Do not harvest forage within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

Established Grasses - Eastern Canada: For the control of yellow rocket and other susceptible winter annual weeds, spray with 1.7 L/ha of 2,4-D LV 600/ha. Application should be made in early fall.

Pre-Harvest Intervals

Do not permit lactating dairy animals to graze fields within 7 days after application.

Do not harvest forage or cut hay within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

Established Pastures and Rangeland - Western Canada

To control susceptible perennials or winter annuals, spray 0.8 to 1.5 L/ha before growth of legumes and grasses start in the spring.

Pre-Harvest Intervals

Do not permit lactating dairy animals to graze fields within 7 days after application.

Do not harvest forage or cut hay within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

Turf Weed Control

To control susceptible weeds, use 1.5 to 2.75 L/ha in enough water for coverage.

Re-entry Interval for Turf

Do not allow people (other than the applicator) or pets on the treatment area during application. Do not enter treated areas until spray has thoroughly dried.

Maximum Application Frequency for Turf

For good turf/lawn management, normally two applications per year per treatment site are adequate. This does not include spot treatments.

WARNING:

Do not use on lawns of creeping grasses such as bent, except for spot spraying or on freshly seeded turf until grass has become well established. Most legumes are usually damaged or killed.

APPLICATION

Table 1 Suggested Amounts of 2,4-D LV 600 for Weed Control in Cereals (not underseeded to legumes)

MIXED WEED GROWTH	STAGE OF WEED KIND OF WEATHER	AMOUNT L/HA	HECTARES TREATED/ 20 L
Susceptible weeds such as: mustard (except dog and green tansy), bluebur, burdock, flixweed*, cocklebur, field horsetail*, stinkweed, goatsbeard, prickly lettuce, Russian thistle*, hoary cress*, kochia, lambsquarters plantain, ragweeds, Russian knapweed, shepherd's purse, annual sunflower, sweet clover, vetch, wild radish.	Seedling(2-4 leaves)Growing rapidly	0.6 L	33
	Weeds in bud Dry, cool weather Heavy infestation	0.9 L	22
Harder to kill weeds such as: biennial wormwood, docks, dandelion, dog mustard, field peppergrass, hairy galinsoga, gumweed, hedge bindweed lady's thumb, oakleaf goosefoot, redroot pigweed, Russian thistle, smartweed, annual sowthistle, tansy, tartary buckwheat, tumbleweed, blue lettuce*, Canada thistle*, field bindweed*, leafy spurge*, perennial sowthistle*, wild buckwheat**	Seedling(2-4 leaves)Growing rapidly	1.0+ L	20
	Weeds in bud Dry or cool weather Heavy infestation	1.5+ L	13

+ The higher rates may cause deformities and delayed maturity which will be offset by a higher relative yield from a less weedy crop.

* Top growth control only.

** Better control will result from 2 treatments applied 1 week apart at 0.6 L/ha 2,4-D.

GENERAL INSTRUCTIONS NON-CROP USE

Ground Application: Apply 50-3000 L of spray solution per hectare depending on the type of application system being used. Use sufficient water to ensure uniform coverage.

Aerial Application (Including Fixed and Rotary Wing Aircraft):

Follow USE PRECAUTIONS FOR AERIAL APPLICATION.

Roadside and General Weed Control:

For taller weed growth such as in vacant lots, on roadsides and along fence rows, sufficient spray should be used to wet all foliage thoroughly. Use 2,4-D LV 600 at the rate of 3.75 L per hectare. Deep rooted perennial weeds, such as bindweed and Canada thistle, may require repeated applications as new growth appears.

Woody Plants: To control 2,4-D susceptible species, spray brush up to 2.5 m tall after foliage is well developed. When using ground application equipment, mix 8.0 L of 2,4-D LV 600 in 1000 L of water and spray to wet all foliage, shoots, stems and bark. With good growing conditions and high soil moistures, spray may be used up to 2 to 3 weeks before normal frost time, but soon after leaves are fully open in the spring usually give best results. Control may be less effective during hot, dry weather when deep soil moisture is deficient. For 2,4-D resistant species use Tordon* 101 Herbicide. When using aerial application equipment, apply 6.75 L of 2,4-D LV 600 in a minimum of 30 L of spray solution per hectare.

Pre-Harvest Intervals:

Do not permit lactating dairy animals to graze fields within 7 days after application.

Do not harvest forage or cut hay within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

USE PRECAUTIONS FOR AERIAL APPLICATIONS (to cereal crops, pasture, rangeland and non-crop land):

Do not spray when winds exceed 8 kmph. Do not spray in dead calm near sensitive plants. The "cloud" of suspended droplets may drift onto sensitive plants when the wind comes up. Spray only when wind is blowing away from a sensitive crop, shelterbelt or garden.

Avoid direct applications to any body of water. Do not

contaminate water through spray drift or by cleaning of equipment or disposal of wastes.

Fixed and rotary-winged aerial applications to field crops should be made in a minimum of 30 L/ha total spray mixture. Use boom pressure of 235 kPa or less. Avoid placing nozzles where spray will enter wing tip vortices.

Do not apply this product directly to, or otherwise permit it to come into direct contact with desirable crops, other desirable broadleaved plants or non-target species and do not permit spray mists to drift onto them.

Coarse sprays are less likely to drift, use only nozzles or nozzle configurations which minimize the production of fine spray drops. Do not angle nozzles forward into the air-stream and do not increase spray volume by increasing nozzle pressure. When spraying, avoid combination of pressure and nozzle type that will result in fine particles (mist) which are more likely to drift. A spray thickening agent or drift retardant may be used with this product to aid in reducing spray drift.

Do not use human flaggers.

Avoid Spray Drift: Apply only when there is little or no hazard from spray drift. Small quantities of the spray, which may not be visible, may seriously injure susceptible crops and damage sensitive non-target habitat. A method must be used to detect air movement, lapse conditions or temperature inversions (stable air) such as the use of balloons or a continuous smoke column at or near the spray site or a smoke generator on the spray equipment. If the smoke develops into layers or indicates a potential for hazardous spray drift, do not spray.

Buffer Zones: Appropriate buffer zones should be established between treatment areas and aquatic systems and treatment areas and significant wildlife habitat.

Sensitive Plants: Vegetables, flowers, grapes, fruit trees and other desirable plants are sensitive to 2,4-D even in minute quantities. Care should be taken to avoid spraying these types of plants or allowing spray mist to drift onto these plants during both their growing and dormant periods. Coarse sprays are less likely to drift. A higher temperatures, vaporization may cause injury to susceptible plants growing nearby.

This product may cause damage to lawns or pastures if applied before the grass is well established. In addition, most legumes may be damaged or killed.

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