

# NOTICE OF WEED CONTROL APPLICATION

Date of Application: October 14-18, 2024

**Location:** Oak Leaf Park

Reason for Application: Target weed control in the planters, rock and DG areas,

tree wells, and cracks of sidewalks and parking lots.

**Product Manufacturer Name:** Round Up Quick Pro Herbicide.

- -EPA registration no. 524-535
- -Active ingredients: glyphosate-ammonium, diquat dibromide
- -Precautionary statement: Harmful if swallowed or inhaled. Causes moderate eye irritation.

Product Manufacturer Name: Lesco Pre-M AquaCap Herbicide

- -EPA registration no. 241-416-10404
- -Active ingredients: Pendimethalin N-(1-ethylpropyl)-3, 4-dimenthyl-2, 6-dinitrobenzenamine
- -Precautionary statement: Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

<sup>\*</sup>No applications within 25 feet of playgrounds

<sup>\*</sup>See attached label and SDS sheet

<sup>\*</sup>Dates are subject to change due to weather

# ATTENTION:

This specimen label is provided for general information only.

- . This pesticide product may not yet be available or approved for sale or use in your area.
- It is your responsibility to follow all Federal, state and local laws and regulations regarding the use of pesticides.
- · Before using any pesticide, be sure the intended use is approved in your state or locality.
- · Your state or locality may require additional precautions and instructions for use of this product that are not included here.
- Monsanto does not guarantee the completeness or accuracy of this specimen label. The information found in this label may differ from the information found on the product label. You must have the EPA approved labeling with you at the time of use and must read and follow all label directions.
- You should not base any use of a similar product on the precautions, instructions for use or other information you find here.
- · Always follow the precautions and instructions for use on the label of the pesticide you are using.

98005J6-17



Roundup QuikPRO herbicide is a fast-acting, non-selective professional herbicide for use in non-crop areas and industrial sites.

# **Complete Directions for Use**

AVOID CONTACT OF THIS HERBICIDE WITH FOLIAGE, STEMS, EXPOSED NON-WOODY ROOTS, OR DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

EPA Reg. No. 524-535

2011-1

Read the entire label before using this product.

Use only according to label instructions.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

# 1.0 INGREDIENTS

ACTIVE INGREDIENTS

*Glyphosate, N-(phosphonomethyl)glycine,	
in the form of its ammonium salt	73.3%
Diquat dibromide [6,7-dihydrodipyrido	
(1,2-a:2',1'-c) pyrazinediium dibromide]	2.9%
OTHER INGREDIENTS	23.8%
	100.0%

<sup>\*</sup>Equivalent to 66.6% of the acid, glyphosate

 $1.0 \ \text{pound}$  contains  $0.73 \ \text{pound}$  of the ammonium salt of glyphosate and  $0.03 \ \text{pound}$  of the dibromide salt of diquat.

This product is protected by U.S. Patent No. 7,008,904. Other patents pending. No license granted under any patent to use this product other than in accordance with this label. No license granted under any non-U.S. patent(s).

# **7**.0 IMPORTANT PHONE NUMBERS

FOR **PRODUCT INFORMATION** OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE, 1-800-332-3111.

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000.

# 3.0 PRECAUTIONARY STATEMENTS

# 3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

# CAUTION!

HARMFUL IF SWALLOWED.
HARMFUL IF INHALED.
CAUSES MODERATE EYE IRRITATION.

Avoid breathing dust or spray mist. Avoid contact with eyes or clothing. Remove contaminated clothing and wash clothing before reuse.

	FIRST AID
IF SWALLOWED	Call a physician or Poison Control Center 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 physician. Do not give anything by mouth to an unconscious person.  Quick treatment is essential to counteract poisoning and should be initiated before signs and symptoms of injury appear.
IF INHALED	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a Poison Control Center or physician for further treatment advice.</li> </ul>
IF IN EYES	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.     Call a Poison Control Center or obvision for treatment advice.

- Have the product container or label with you when calling a poison control center or physician, or going for treatment.
- You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.
- This product is identified as Roundup QuikPRO<sup>™</sup> herbicide, EPA Registration No. 524-535.

DOMESTIC ANIMALS: Keep livestock and pets out of treated areas. Do not graze livestock on treated areas. This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

# Personal Protective Equipment (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, protective footwear plus socks, and protective eyewear, Discard clothing and other materials that have been heavily contaminated with this product's concentrate. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## **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. As soon as possible, wash thoroughly and change into clean clothing.

# **3**.2 Environmental Hazards

This product is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

# 3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

## **DIRECTIONS FOR USE**

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

Entry Restrictions: Keep all unprotected persons out of operating areas or vicinity where there may be drift. Keep people and pets off treated areas until spray solution has dried.

# 4.0 STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable Federal, State and local procedures.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. When completely empty, offer for recycling if available, or dispose of bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

# **5**.0 PRODUCT INFORMATION

Product Description: This product is a postemergent, systemic herbicide with no residual soil activity. It is non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. This product is formulated as a water-soluble granule containing surfactant and no additional surfactant is needed. Apply through most standard sprayers after dissolution and thorough mixing with water according to label instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact and into the root system. Visible effects on most annual weeds occur within 1 day, and on most perennial weeds in 2 days. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a quick yellowing of the foliage which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Mode of Action: One of the active ingredients in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids. A second active rapidly disrupts cell integrity of photosynthetically active tissues in the contacted foliage.

Cultural Considerations: Reduced control may result when application is made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate weed control.

Spray Coverage: Uniform and complete spray coverage will provide best results. Do not spray weed foliage to the point of runoff.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Plants growing from unattached underground rhizomes or root stocks of perennials that have not yet emerged at the time of application will not be affected by the herbicide and will continue to grow.

Annual Maximum Use Rate: The maximum allowed application rates apply to this product combined with the use of any and all other herbicides containing the active ingredient glyphosate, whether applied separately or as tank mixtures. If more than one glyphosate-containing product is applied to the same site within the same year, you must ensure that the total use of glyphosate (pounds acid equivalent) does not exceed the maximum allowed. For non-crop uses, the combined total of all treatments must not exceed 12.25 pounds of this product (8 pounds of glyphosate acid) per acre per year.

#### ATTENTION

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, EXPOSED NON-WOODY ROOTS, OR DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to desirable plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or desirable plants, or other unintended consequences. Keep container closed to prevent spills and contamination.

# 6.0 MIXING

Mix only the amount of solution to be used during a 1-day period. Reduced visual activity but not efficacy will result from the use of leftover solution.

Clean sprayer parts immediately after using this product by thoroughly flushing with water

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL SEDIMENT IS USED AS A CARRIER. DO NOT MIX THIS PRODUCT WITH WATER FROM PONDS AND DITCHES THAT IS VISIBLY MUDDY OR MURKY.

Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, toaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed use an approved anti-foam or defoaming agent

# 6.1 Tank-Mixing

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control, a broader weed control spectrum or an alternate mode of action. Read and follow all individual product labels, supplemental labeling and Fact Sheets for all products in the tank mixture and observe all precautions and limitations on the label, including application timing restrictions, soil restrictions and use according to the most restrictive precautionary statements for each product in the tank mixture. Always predetermine the compatibility of all tank-mix products together in the carrier by mixing small proportional quantities in advance.

Buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified ion this label. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance.

# **6**.2 Procedure for Preparing Spray Solution

Use the following procedure to mix this product in water alone or when preparing tank mixtures with other labeled products.

- 1. Place a 20- to 35-mesh screen or wetting basket over filling port.
- 2. Through the screen, fill the spray tank one-half full with water and start agitation.
- 3. Add Roundup QuikPRO herbicide using a circular motion while pouring.
- 4. If second product is a wettable powder, first make a slurry with the water carrier, then add the slurry SLOWLY through the screen into the tank. Continue agitation.
- If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
- If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
- Continue filling the spray tank with water and add water soluble liquids near the end of the filling process.

When tank mixing this product with other products, maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Use a screen size in nozzle or line strainers no finer than 50-mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

# **6.**3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by adding the amount of this product as shown in the following table to a clean, empty sprayer. Add the appropriate amount of water and stir or agitate to ensure dissolution of this product. For best results when using backpack sprayers, mix the labeled amount of this product with the specified volume of water in a larger container. Fill sprayer with the mixed solution.

#### Spray Solution

Amount of Roundup QuikPRO herbicide					
Desired Volume Annuals Perennials Brush Low-Volume Directed					
1 Gal	1.2 oz	1.5 oz	1.5 oz	4.0 oz to 8.0 oz	
3 Gal	3.6 oz	4.5 oz	4.5 oz	12.0 oz to 1.5 lb	
10 Gal	12.0 oz	15.0 oz	15.0 oz	2.5 lb to 5.0 lb	

# **6.4** Colorants or Dyes

Colorants or marking dyes may be added to this product; however, they can reduce product performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's directions. Certain blue dyes are not stable in the spray solution in the presence of this product. A jar test to determine if the desired blue dye is stable is recommended. If stability is a problem consider switching to an alternate color dye.

# **6.5** Drift Control Additives

Drift control additives may be used with all equipment types. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

# 7.0 APPLICATION EQUIPMENT AND TECHNIQUES

## SPRAY DRIFT MANAGEMENT

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS.

Avoiding spray drift at the application site is the responsibility of the applicator and grower. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

## Do not apply this product by air.

Do not apply this product through any type of irrigation system.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to desirable plants or other areas on which treatment was not intended.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

# 7.1 Ground Broadcast Equipment

Use the labeled rates of this product in 10 to 80 gallons of water per acre as a broadcast spray unless otherwise specified on this label or in separate supplemental labeling or Fact Sheets published for this product. As the density of weeds increases, increase the spray volume within the labeled range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check for even distribution of spray droplets.

# 7.2 Backpack or Hand-Held Equipment

Apply to foliage of vegetation to be controlled on a spray-to-wet basis; do not spray to the point of runoff. For best results, ensure that spray coverage is uniform and complete. He coarse sprays only

For control of weeds listed in the Annual Weeds section of the WEEDS CONTROLLED section, apply 1.2 ounces of this product per 1 gallon of spray solution. See table in Mixing for Hand-Held Sprayers section for larger mixing volumes.

For best results, use 1.5 ounces of this product per 1 gallon of spray solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle. See table in Mixing for Hand-Held Sprayers section for larger mixing volumes.

For low-volume directed spray applications, use 4.0 to 8.0 ounces of this product per 1 gallon of spray solution for control or partial control of brush weeds. See table in Mixing for Hand-Held Sprayers section for larger mixing volumes. Ensure spray coverage is uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of brush and tree seedlings when foliage is thick and dense, or where there are multiple sprouts.

# 7.3 CDA Equipment

The rate of this product applied per acre by controlled droplet application (CDA) equipment must not be less than the amount stated in this label when applied by conventional broadcast equipment. For vehicle mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For hand-held CDA units, apply a solution of 1.5 to 2.0 pounds of this product in one gallon of water at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mile per hour.

CDA equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction is likely to result.

# **Q.**0 SITE AND USE INSTRUCTIONS

Unless otherwise specified, applications may be made to control any weeds listed in the annual, perennial and brush weeds and tree seedlings tables.

# **Q.1** Non-crop Areas and Industrial Sites

Use in non-crop areas only: airports, apartment complexes, commercial sites, Conservation Reserve Program (CRP), ditch banks, driveways, dry ditches, dry canals, fencerows, golf courses, industrial sites, landscape areas, lumberyards, manufacturing sites, municipal sites, natural areas, office complexes, ornamental landscapes, parks, parking areas, recreational areas, residential areas, rights-of-way, roadsides, schools, sports complexes, storage areas, warehouse areas, and wildlife management areas.

This product is not for use on crops, timber, other plants being grown for sale, other commercial use, or for commercial seed production. This product is not for research purposes.

Weed Control, Trim-and-Edge and Bare Ground

Use this product in non-crop areas. Apply with any application equipment described in this label. This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation, and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects. This product is not for use on plants grown for sale or other commercial use, or for commercial seed production.

Repeated applications of this product may be used as weeds emerge to maintain bare ground.

When a tank mixture with a generic active ingredient, such as 2,4-D or pendimethalin is described in this label, the user is responsible for ensuring that the specific application being made is included on the label of the specific product being used in the tank -mixture.

This product may be tank-mixed with the following products. Refer to these products' labels for approved non-crop sites and application rates.

BANVEL PENDULUM 3.3 EC
BARRICADE 65WG PENDULUM WDG
CERTAINTY\* RONSTAR 50 WP
DIMENSION 4 EC SURFLAN
ENDURANCE 2,4-D
PENDIMETHALIN

When applied as a tank mixture for bare ground, Roundup QuikPRO herbicide provides control of the emerged annual weeds and control or partial control of emerged perennial weeds.

## **Dormant Turfgrass**

Use this product to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Treat only when turf is dormant and prior to spring greenup. This product is not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research

Apply 5 to 16 ounces of this product per acre. Apply the labeled rates in 10 to 80 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 9 ounces per acre may result in injury or delayed greenup in highly maintained areas, golf courses and lawns.

Turfgrass Renovation (Except for Commercial Sod Farms)

This product controls most existing vegetation prior to renovating turfgrass areas. This product is not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. Do not use this product for renovation of bermudagrass or kikuyugrass sods. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrasses may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass.

Do not feed or graze treated turfgrass or feed treated thatch to livestock.

# 8.2 Parks, Recreational and Residential Areas

This product may be used in parks, recreational and residential areas. Apply this product with any application equipment described in this label. Use this product to trim-and-edge around trees, fences, paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation or to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the instructions in the Non-Crop Areas and Industrial Sites section apply to park and recreational areas. This product is not for use around plants being grown for sale or other commercial use.

# 9.0 WEEDS CONTROLLED

Always use the higher rate of this product per acre within the range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

Refer to the following label sections for rates to control annual and perennial weeds. For difficult to control perennial weeds and where plants are growing under stressed conditions, or where infestations are dense, this product may be used at up to 12.25 pounds per acre for enhanced results.

# 9.1 Annual Weeds

Use 2.25 to 4.5 pounds per acre of this product as a broadcast spray to control annual weeds. When using rates less than 4.5 pounds per acre, the level of fast-burn symptomology may be reduced.

For spray-to-wet applications, apply 1.2 ounces of this product per 1 gallon of spray solution

# WEED SPECIES Anoda, spurred

Barley\* Barnyardgrass\* Bassia, fivehook Rittercress\* Black nightshade\* Bluegrass, annual\* Bluegrass, bulbous\* Brome, downy\* Brome, Japanese\* Browntop panicum Buttercup' Carolina foxtail\* Carolina geranium Castor bean Cheatgrass\* Cheeseweed (Malva parviflora) Chervil\* Chickweed\* Cocklebur\* Copperleaf, hophornbeam Corn\* Corn sneedwell\* Crabgrass\* Dwarfdandelion\* Eastern mannagrass\* Eclipta\* Fall panicum\* Falsedandelion\*

Falseflax, smallseed\*

Field pennycress\* Filaree Fleabane, annual\* Fleabane, hairy (Convza bonariensis)\* Fleabane, rough\* Florida pustey Goatgrass, jointed\* Goosegrass Grain sorghum (milo)\* Groundsel, common<sup>3</sup> Hemp sesbania Horseweed/Marestail (Conyza canadensis) Itchgrass\* Johnsongrass, seedling Junglerice Knotweed Kochia Lambsquarters\* Little barley London rocket\* Mayweed Medusahead\* Morningglory (Ipomoea spp.) Mustard, blue\* Mustard tansy Mustard, tumble<sup>3</sup> Mustard, wild\*

Pigweed\* Speedwell, purslane<sup>3</sup> Plains/Tickseed coreopsis\* Sprangletop Prickly lettuce\* Spurge, annual Spurge, prostrate\* Purslane, common Spurge, spotted\* Ragweed common\* Spurry, umbrella\* Ragweed, giant Starthistle, yellow Red rice Russian thistle Stinkgrass\* Sunflower\* Rye\* Teaweed/Prickly sida Ryegrass\* Sandbur field\* Texas nanicum Shattercane Velvetleaf Shepherd's-purse\* Virginia copperleaf Sicklepod Virginia pepperweed\* Signalgrass, broadleaf\* Wheat\* Smartweed, ladysthumb\* Wild oats' Smartweed Pennsylvania\* Witchgrass' Sowthistle, annual Woolly cupgrass' Spanishneedles Yellow rocket

\*When using field broadcast equipment (boom sprayers using flat-fan nozzles) these species will be controlled or partially controlled. Applications must be made using 10 to 80 gallons of carrier volume per acre. Use nozzles that ensure thorough coverage of foliage and treat when weeds are in an early growth stage.

# **Q.2** Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For non-flowering plants, best results are obtained when the plants reach a mature stage of growth. In many situations, treatments are required prior to these growth stages. Under these conditions, use the higher application rate within the range.

Use 4.5 to 9.0 pounds per acre of this product as a broadcast spray to control perennial weeds. When using rates less than 9.0 pounds per acre, the level of fast-burn symptomology may be reduced.

For spray-to-wet applications, apply 1.5 ounces of this product per 1 gallon of spray solution. Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment.

When using hand-held equipment for low-volume directed spot treatments, apply 4.0 to 8.0 ounces of this product per 1 gallon of spray solution.

Johnsongrass

Allow 7 or more days after application before tillage.

## **WEED SPECIES**

Alfalfa\*

Alligatorweed\* Kikuyugrass\* Anise (fennel) Knapweed Lantana Beachgrass, European Lespedeza (Ammophila arenaria) Milkweed, common Bentgrass\* Muhly, wirestem Bermudagrass\* Mullein, common Bermudagrass, water **Napiergrass** (knotgrass) Nightshade, silverleaf Bindweed, field Nutsedge: purple, vellow Bluegrass, Kentucky Orchardgrass Blueweed, Texas **Pampasgrass** Bromegrass, smooth **Paragrass** Pepperweed, perennial Bursage, woolly-leaf Phragmites\* Canarygrass, reed Poison hemlock Cattail Clover; red, white\* Quackgrass Redvine\* Cogongrass Reed, giant Dallisgrass Dandelion Ryegrass, perennial Dock, curly Spurge, leafy\* Thistle, artichoke Dogbane, hemp Thistle, Canada Fescue Fescue, tall Timothy German ivy Torpedograss\* Guineagrass Trumpetcreeper\* Horsenettle Vaseygrass Horseradish Velvetgrass Iceplant Wheatgrass, western Jerusalem artichoke

# **9**.3 Brush Weeds and Tree Seedlings

Best results are obtained when brushweeds are treated when they are in the seedling stage of growth. In many situations, retreatment is required on larger plants. Under these conditions, use the higher application rate within the range.

Use 9.0 pounds per acre of this product as a broadcast spray to control brush weeds.

For spray-to-wet applications, apply 1.5 ounces of this product per 1 gallon of spray solution. Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment.

<sup>\*</sup>Partial Control

When using hand-held equipment for low-volume directed spot treatments, apply 4.0 to 8.0 ounces of this product per 1 gallon of spray solution.

Allow 7 or more days after application before tillage.

### WEED SPECIES

Alder Oak, southern red Ash\* Oak, white\* Beech\* Peppertree, Birch Brazilian Blackberry (Florida holly)\* Blackgum Pine Cherry; bitter, Poison ivy\* black, pin Poison oak\* Dogwood\* Poplar, yellow\* Elderberry Redbud, eastern Flm\* Rose, multiflora Honeysuckle Saltcedar\* Locust, black\* Sumac; laurel, poison, smooth, sugarbush, Manle red winged\* Maple, sugar Oak, black\* Sweetgum Oak, northern pin Vine manle\* Oak, post Virginia creeper Waxmyrtle, southern\* Oak, red Oak, scrub\*

# 10.0 LIMIT OF WARRANTY AND LIABILITY

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

To the extent consistent with applicable law, buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company to the extent consistent with applicable law, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Certainty, Roundup QuikPRO, and Monsanto and Vine Design are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

Product of Brazil, formulated in the U.S. with U.S. Ingredients

EPA Reg. No. 524-535

In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000.

Packed for: MONSANTO COMPANY 800 N. LINDBERGH BLVD. ST. LOUIS, MISSOURI, 63167 U.S.A. ©2011 120810



<sup>\*</sup>Partial Control



# ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA 102000037606

Revision Date: 10/01/2020 Print Date: 10/02/2020

# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product identifier** 

Trade name

ROUNDUP QUIKPRO™ HERBICIDE

Product code (UVP)

86809095

**SDS Number** 

102000037606

**EPA** Registration No.

524-535

Relevant identified uses of the substance or mixture and uses advised against

Use

Herbicide

Restrictions on use

See product label for restrictions.

Information on supplier

**Supplier** 

Bayer Environmental Science A division of Bayer CropScience LP

5000 Centregreen Way, Suite 400

Cary, NC 27513

**USA** 

**Responsible Department** 

Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

**Emergency Telephone** 

Number (24hr/ 7 days)

1-800-334-7577

**Product Information Telephone Number** 

1-800-331-2867

## **SECTION 2: HAZARDS IDENTIFICATION**

Classification in accordance with regulation HCS 29CFR §1910.1200

Specific target organ toxicity - repeated exposure: Category 2

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning

**Hazard statements** 

May cause damage to organs (Eyes, Kidney) through prolonged or repeated exposure.



# ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA 102000037606 Revision Date: 10/01/2020 Print Date: 10/02/2020

## **Precautionary statements**

Do not breathe dust.

Get medical advice/ attention if you feel unwell.

Dispose of contents/container in accordance with local regulation.

## **Hazards Not Otherwise Classified (HNOC)**

No physical hazards not otherwise classified. No health hazards not otherwise classified.

# **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component NameCAS-No.Concentration % by weightAmmonium salt of glyphosate114370-14-873.3Diquat dibromide85-00-72.9Polyether modified trisiloxane134180-76-014.1

## **SECTION 4: FIRST AID MEASURES**

## Description of first aid measures

General advice When possible, have the product container or label with you when

calling a poison control center or doctor or going for treatment.

**Inhalation** Move to fresh air. If person is not breathing, call 911 or an ambulance,

then give artificial respiration, preferably mouth-to-mouth if possible.

Call a physician or poison control center immediately.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Take

off contaminated clothing and shoes immediately. Call a physician or

poison control center immediately.

Eye contact Hold eye open and rinse slowly and gently with water for 15-20

minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center

immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth

and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim

unattended.

Most important symptoms and effects, both acute and delayed

**Symptoms** To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

**Risks** This product is not a cholinesterase inhibitor.

Treatment Treatment with atropine and oximes is not indicated. Appropriate

supportive and symptomatic treatment as indicated by the patient's

condition is recommended.



# ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA 102000037606

Revision Date: 10/01/2020 Print Date: 10/02/2020

# **SECTION 5: FIREFIGHTING MEASURES**

Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon

dioxide.

Unsuitable High volume water jet

Special hazards arising from the substance or

mixture

In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Oxides of

phosphorus

**Advice for firefighters** 

Special protective equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and

full protective clothing. Equipment should be thoroughly

decontaminated after use.

Further information Keep out of smoke. Fight fire from upwind position. Cool closed

containers exposed to fire with water spray. Do not allow run-off from

fire fighting to enter drains or water courses.

Flash point Not applicable

Auto-ignition temperature No data available

Lower explosion limitNot applicableUpper explosion limitNot applicable

**Explosivity** Not explosive

# **SECTION 6: ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

**Precautions**Use personal protective equipment. Keep unauthorized people away.

Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid

binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects

thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. If the product is accidentally

spilled, do not allow to enter soil, waterways or waste water canal. Do

not allow product to contact non-target plants.



# ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA 102000037606

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Reference to other sections Infor

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

# **SECTION 7: HANDLING AND STORAGE**

# Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Hygiene measures

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or

applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be

cleaned must be destroyed (burnt).

# Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix

before using.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

# **Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Diquat dibromide	85-00-7	0.5 mg/m3 (TWA)	03 2014	ACGIH
(Inhalable fraction.)				
Diquat dibromide	85-00-7	0.1 mg/m3 (TWA)	03 2014	ACGIH
(Respirable fraction.)				
Diquat dibromide	85-00-7	0.5 mg/m3 (REL)	2010	NIOSH
Diquat dibromide	85-00-7	0.5 mg/m3 (TWA)	06 2008	TN OEL
Diquat dibromide	85-00-7	0.5 mg/m3 (TWA PEL)	08 2010	US CA OEL



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# ROUNDUP QUIKPRO™ HERBICIDE

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(Total dust.)

# **Exposure controls**

# Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection When respirators are required, select NIOSH approved equipment

based on actual or potential airborne concentrations and in

accordance with the appropriate regulatory standards and/or industry

recommendations.

Hand protection Please observe the instructions regarding permeability and

breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the

contact time.

Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile

rubber or Viton)

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating,

drinking, smoking or using the toilet.

**Eye protection** Use tightly sealed goggles and face protection.

**Skin and body protection** Wear long-sleeved shirt and long pants and shoes plus socks.

**General protective measures** Follow manufacturer's instructions for cleaning/maintaining PPE. If

no such instructions for washables, use detergent and warm/tepid

water.

Keep and wash PPE separately from other laundry.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

# Information on basic physical and chemical properties

Form small rod

Colour light yellow to brown

**Odour** slight

Odour Threshold No data available

**pH** 3.7 (10 g/l)

Melting point/range No data available

**Boiling Point** 

No data available

Flash point Not applicable

Flammability No data available



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**Auto-ignition temperature** No data available

Minimum ignition energy Not applicable Self-accelarating

decomposition temperature

(SADT)

No data available

Upper explosion limit Not applicable Lower explosion limit Not applicable No data available Vapour pressure **Evaporation rate** No data available No data available Relative vapour density Relative density No data available

**Density** No data available

0.68 g/ml (bulk density tapped) **Bulk density** 

Water solubility soluble

Partition coefficient: n-

octanol/water

Glyphosate: log Pow: -2.9

Diquat dibromide: log Pow: -4.6

Viscosity, dynamic No data available Viscosity, kinematic No data available

Oxidizing properties No oxidizing properties

**Explosivity** Not explosive

Other information Further safety related physical-chemical data are not known.

# **SECTION 10: STABILITY AND REACTIVITY**

Reactivity

Thermal decomposition Stable under normal conditions.

**Chemical stability** Stable under recommended storage conditions.

Possibility of hazardous

reactions

Reacts with galvanised steel or unlined mild steel to produce hydrogen,

a highly flammable gas that could explode.



# ROUNDUP QUIKPRO™ HERBICIDE

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Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Galvanised steel, Unlined mild steel

**Hazardous decomposition** 

products

No decomposition products expected under normal conditions of use.

# **SECTION 11: TOXICOLOGICAL INFORMATION**

**Exposure routes** 

Skin contact, Eye contact, Inhalation

**Immediate Effects** 

Eye

May cause mild irritation to eyes.

Skin

Not expected to produce significant adverse effects when

recommended use instructions are followed.

Ingestion

Harmful if swallowed.

Inhalation

Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity

LD50 (Rat) 4,443 mg/kg

Acute inhalation toxicity

LC50 (Rat) > 0.99 mg/l

Exposure time: 4 h

Determined in the form of liquid aerosol.

Highest attainable concentration.

Acute dermal toxicity

LD50 (Rat) > 5,000 mg/kg

Skin corrosion/irritation

Slight irritant effect - does not require labelling. (Rabbit)

Serious eye damage/eye

irritation

Moderate eye irritation. (Rabbit)

Respiratory or skin

sensitisation

Skin: Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test

# Assessment STOT Specific target organ toxicity – single exposure

Glyphosate: Based on available data, the classification criteria are not met.

Diguat dibromide: May cause respiratory irritation.

## Assessment STOT Specific target organ toxicity – repeated exposure

Glyphosate did not cause specific target organ toxicity in experimental animal studies.

Diquat dibromide caused specific target organ toxicity in experimental animal studies in the following organ(s): Eyes, Kidney. Diquat dibromide caused Cataract in animal studies.

# **Assessment mutagenicity**

Glyphosate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests. Diquat dibromide was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

## Assessment carcinogenicity

Glyphosate was not carcinogenic in lifetime feeding studies in rats and mice.



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Important comment to IARC Listing:, Our expert opinion is that classification as a carcinogen is not warranted.

Diquat dibromide was not carcinogenic in lifetime feeding studies in rats and mice.

**ACGIH** 

Diquat dibromide

85-00-7

Group A4

**NTP** 

None.

**IARC** 

Ammonium salt of glyphosate

114370-14-8

Overall evaluation: 2A

**OSHA** 

None.

# Assessment toxicity to reproduction

Glyphosate did not cause reproductive toxicity in a two-generation study in rats. Diquat dibromide did not cause reproductive toxicity in a two-generation study in rats.

## Assessment developmental toxicity

Glyphosate did not cause developmental toxicity in rats and rabbits.

Diquat dibromide caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Diquat dibromide are related to maternal toxicity.

## **SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 5.4 mg/l

static test; Exposure time: 96 h

Test conducted with a similar formulation.

LC50 (Lepomis macrochirus (Bluegill sunfish)) 12.1 - 21.5 mg/l

static test; Exposure time: 72 h

The value mentioned relates to the active ingredient diquat dibromide.

LC50 (Oncorhynchus mykiss (rainbow trout)) 14.8 mg/l

static test; Exposure time: 96 h

The value mentioned relates to the active ingredient diguat dibromide.

Chronic toxicity to fish Oncorhynchus mykiss (rainbow trout)

flow-through test NOEC: >= 9.63 mg/l

The value mentioned relates to the active ingredient glyphosate.

Toxicity to aquatic invertebrates

R h

EC50 (Daphnia magna (Water flea)) 11 mg/l static test; Exposure time:

48 n

Test conducted with a similar formulation.

EC50 (Daphnia magna (Water flea)) 0.77 - 1.19 mg/l static test;

Exposure time: 48 h



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The value mentioned relates to the active ingredient diguat dibromide.

Chronic toxicity to aquatic

invertebrates

EC50 (Daphnia magna (Water flea)): 12.5 mg/l

Exposure time: 21 d

The value mentioned relates to the active ingredient glyphosate.

static test; Exposure time: 72 h

The value mentioned relates to the active ingredient glyphosate.

NOEC (Raphidocelis subcapitata (freshwater green alga)) 26.4 mg/l

static test; Exposure time: 72 h

The value mentioned relates to the active ingredient glyphosate.

EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.0094 mg/l

static test; Exposure time: 96 h

The value mentioned relates to the active ingredient diquat dibromide.

**Biodegradability** Glyphosate:

Not rapidly biodegradable

Diquat dibromide:

Not rapidly biodegradable

**Koc** Diquat dibromide: Koc: 2184750

**Bioaccumulation** Glyphosate: Bioconcentration factor (BCF) < 1

Does not bioaccumulate.

Diquat dibromide: Bioconcentration factor (BCF) 1

Does not bioaccumulate.

Mobility in soil Glyphosate: Slightly mobile in soils

Diquat dibromide: Immobile in soil

Results of PBT and vPvB assessment

PBT and vPvB assessment Glyphosate: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Diquat dibromide: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Additional ecological

information

No further ecological information is available.

**Environmental precautions** Apply this product as specified on the label.

Do not apply directly to water, to areas where surface water is present

or to intertidal areas below the mean high water mark.

Do not contaminate surface or ground water by cleaning equipment or

disposal of wastes, including equipment wash water. Retain and dispose of contaminated wash water.



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# **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste treatment methods

Product It is best to use all of the product in accordance with label directions. If it

is necessary to dispose of unused product, please follow container label

instructions and applicable local guidelines.

Do not contaminate water, food, or feed by disposal. Follow all local/regional/national/international regulations.

**Contaminated packaging** Follow advice on product label and/or leaflet.

Do not re-use empty containers.

Triple rinse containers.

Puncture container to avoid re-use.

Completely empty container into application equipment, then dispose of

empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.

If burned, stay out of smoke.

RCRA Information Characterization and proper disposal of this material as a special or

hazardous waste is dependent upon Federal, State and local laws and

are the user's responsibility. RCRA classification may apply.

## **SECTION 14: TRANSPORT INFORMATION**

49CFR

UN number 3077 Class 9 Packaging group III

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID,

N.O.S.

(DIQUAT DIBROMIDE)

RQ Reportable Quantity is reached with 34,482 lb of product.

**IMDG** 

UN number 3077
Class 9
Packaging group III
Marine pollutant YES

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(DIQUAT DIBROMIDE)

IATA

UN number 3077
Class 9
Packaging group III
Environm. Hazardous Mark YES

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.



# ROUNDUP QUIKPRO™ HERBICIDE

Version 1.0 / USA 102000037606

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# (DIQUAT DIBROMIDE)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification:

COMPOUNDS, TREE OR WEED KILLING, N.O.I. other than poison, HAVING A DENSITY OF 20 LBS OR GREATER PER CUBIC FOOT

# **SECTION 15: REGULATORY INFORMATION**

**EPA** Registration No.

524-535

**US Federal Regulations** 

**TSCA list** 

Polyether modified trisiloxane

134180-76-0

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No export notification needs to be made.

SARA Title III - Section 302 - Notification and Information

Not applicable.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

# **US States Regulatory Reporting**

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients** 

Diquat dibromide

85-00-7

CA, CT, IL, NJ, RI

**Environmental** 

**CERCLA** 

Yes

Diquat dibromide

85-00-7

Listed

Clean Water Section 307(a)(1)

None.

Safe Drinking Water Act Maximum Contaminant Levels

Yes

Diquat dibromide

85-00-7

## **EPA/FIFRA Information:**



# ROUNDUP QUIKPRO™ HERBICIDE

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This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word:

Caution!

Hazard statements:

Harmful if swallowed. Harmful if inhaled.

Causes moderate eye irritation.

## **SECTION 16: OTHER INFORMATION**

Abbreviations and acronyms

49CFR Code of Federal Regulations, Title 49 **ACGIH** US. ACGIH Threshold Limit Values

ATE Acute toxicity estimate

CAS-Nr. Chemical Abstracts Service number

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

**EINECS** European inventory of existing commercial substances

**ELINCS** European list of notified chemical substances IARC International Agency for Research on Cancer International Air Transport Association IATA International Maritime Dangerous Goods **IMDG** 

Not otherwise specified N.O.S.

NTP US. National Toxicology Program (NTP) Report on Carcinogens Organization for Economic Co-operation and Development OECD

**TDG** Transportation of Dangerous Goods

TWA Time weighted average

UN **United Nations** 

World health organisation WHO

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 2 Others -

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide) Health - 2 Flammability - 1 Physical Hazard - 2 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 10/01/2020

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

# **LESCO**®

PEEL HERE
TO OPEN ->

# PRE-M® AquaCap® Herbicide

For use as a preemergence weed control herbicide in turfgrass, landscape or grounds maintenance, noncropland areas, and ornamental production

Active Ingredient: pendimethalin:

N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine 38.7%

Other Ingredients: 61.3%

Total: 100.0%

1 gallon contains 3.8 lbs of microencapsulated pendimethalin in an aqueous carrier.

# CAUTION/PRECAUCIÓN

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.)

In case of an emergency endangering life or property involving this product, call day or night 1-800-424-9300.

See inside for complete Precautionary Statements, First Aid, Directions For Use, Condition of Sale and Limitation of Warranty and Liability, and state-specific crop and/or use site restrictions.



#59025333

Net Contents: 2.5 gal (9.46 L)

EPA Reg. No. 241-416-10404

EPA Est. No. 241-MO-001

Manufactured for: LESCO, Inc. • 1385 East 36th Street • Cleveland, OH 44114-4114

LESCO and Pre-M are registered trademarks and the sweeping design is a trademark of LESCO Technologies LLC. AquaCap is a trademark of BASF Corporation. (121418)

TM



#### **FIRST AID**

#### If in eyes

- Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes.
- Call a poison control center or doctor for treatment advice.

#### **HOTLINE**

Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency endangering life or property involving this product, call day or night, 1-800-424-9300.

# **Precautionary Statements**

#### **Hazards To Humans And Domestic Animals**

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

#### Personal Protective Equipment (PPE)

Some materials that are chemically resistant to these products are listed below. For more options, refer to **Category A** on an EPA chemical-resistance category selection chart.

#### Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- · Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **Engineering Controls**

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.

#### **Environmental Hazards**

This product is toxic to fish. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

#### **Directions For Use**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at time of herbicide application.

DO NOT apply this product through any type of irrigation system.

LESCO, Inc. does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

**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 requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

**DO NOT** apply **LESCO Pre-M AquaCap Herbicide** in greenhouses, shadehouses, or other enclosed structures.

Not for use for commercial seed production.

#### 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 **24 hours**.

PPE 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 made of any waterproof material such as nitrile, butyl, neoprene, and/or barrier laminate
- Shoes plus socks





#### NONAGRICULTURAL 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.

**DO NOT** enter treated areas without protective clothing until sprays have dried

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

# STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

#### Pesticide Storage

**DO NOT** store below 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals discolved.

### Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. 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**

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

# CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully and completely. It is impossible to eliminate all risks inherently associated with the use of this product. To the extent consistent with applicable law, Buyer and/or User assume all risks of ineffectiveness or other unintended consequences or damages that may result from conditions outside or beyond the control of LESCO, Inc. including but not limited to, such factors as manner of use or application, weather or weather conditions outside the range considered normal at the application site or for the time period in which the product is applied, the presence of other materials, incompatible products, or other influencing factors

which are beyond the control of LESCO, Inc. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and/or User, and Buyer and/or User agrees to hold LESCO, Inc. harmless for any claims relating to such factors.

LESCO, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with the Directions for Use under normal use conditions. To the extent consistent with applicable law, this warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of LESCO, Inc. and Buyer and/or User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LESCO, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE BUYER AND/OR USER AND THE EXCLUSIVE LIABILITY OF LESCO, INC. FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF LESCO, INC. REPLACEMENT OF THE PRODUCT, OR IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL LESCO, Inc., BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

LESCO, Inc. offers this product, and Buyer and/or User accepts it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of LESCO, Inc.

#### **General Information**

#### Mode of Action

**LESCO Pre-M AquaCap Herbicide** is a meristematic inhibitor that interferes with the plant cellular division or mitosis and cell elongation in the growing points of shoots and roots of susceptible weeds. When susceptible weeds germinate in the treated area, they contact the herbicide and both shoot and root growth stops. Translocation of the herbicide within the plant is limited. Affected weeds die shortly after growth is stopped, usually before emergence from the soil.

#### Weeds Controlled

LESCO Pre-M AquaCap Herbicide will not control established weeds. If weeds germinate before herbicide activation, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. Use LESCO Pre-M AquaCap Herbicide with herbicides registered for postemergence application (i.e. Roundup® herbicide or Finale® herbicide) for the control of established weeds. DO NOT apply sprays containing Roundup or Finale over the top of desirable plants. A LESCO Pre-M AquaCap Herbicide treatment may be followed by any registered herbicide to control weeds not listed on the LESCO Pre-M AquaCap Herbicide label.

The efficacy of LESCO Pre-M AquaCap Herbicide will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in specific properties. Erratic weed control may result if LESCO Pre-M AquaCap Herbicide is not activated by rainfall or irrigation within 30 days.

The following grass and broadleaf weeds are controlled by preemergence treatments of **LESCO Pre-M AquaCap Herbicide** at the specified rates.



Table	1.	Weeds	Controlled
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Common Name	Scientific Name
Grasses	
Barnyardgrass	Echinochloa crus-galli
Bluegrass, annual	Poa annua
Crabgrass	Digitaria spp.
Crowfootgrass	Dactyloctenium aegyptium
Foxtail, giant	Setaria faberi
Foxtail, green	Setaria viridis
Foxtail, yellow	Setaria glauca
Goosegrass	Eleusine indica
Itchgrass	Rottboellia exaltata
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colona
Lovegrass (from seed)	Eragrostis spp.
Panicum, browntop	Panicum fasciculatum
Panicum, fall	Panicum dichotomiflorum
Panicum, Texas	Panicum texanum
Sandbur, field	Cenchrus incertus
Signalgrass	Brachiaria platyphylla
Sprangletop, Mexican	Leptochloa uninervia
Sprangletop, red	Leptochloa filiformis
Witchgrass	Panicum capillare
Woolly cupgrass	Eriochloa villosa
Broadleaf Weeds	
Burweed, lawn	Soliva pterosperma
Carpetweed	Mollugo verticillata
Chickweed, common	Stellaria media
Chickweed, mouseear	Cerastium vulgatum
Clover, hop	Trifolium procumbens
Cudweed	Gnaphalium spp.
Evening primrose	Oenothera biennis
Fiddleneck	Amsinckia intermedia
Filaree	Erodium spp.
Henbit	Lamium amplexicaule
Knotweed, prostrate	Polygonum aviculare
Kochia	Kochia scoparia
Lambsquarters	Chenopodium album
Pigweed	Amaranthus spp.
Puncturevine	Tribulus terrestris
Purslane	Portulaca oleracea
Pusley, Florida	Richardia scabra
Rocket, London	Sisymbrium irio

Table 1. Weeds Controlled (continued)

Common Name	Scientific Name			
Broadleaf Weeds (continued)				
Shepherdspurse	Capsella bursa-pastoris			
Smartweed, Pennsylvania	Polygonum pensylvanicum			
Speedwell, corn	Veronica arvensis			
Spurge, annual	Euphorbia spp.			
Spurge, prostrate	Chamaesyce humistrata			
Woodsorrel, yellow	Oxalis stricta			
Velvetleaf (Buttonweed)	Abutilon theophrasti			

#### **Application Use Sites**

Use LESCO Pre-M AquaCap Herbicide for preemergence control of grass and certain broadleaf weed species as they germinate in any furfgrass site (golf courses, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas. Examples of such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas, and sod farms.

LESCO Pre-M AquaCap Herbicide can be applied for general grounds maintenance in areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, and mulch beds. It may be used under asphalt or concrete treatments as part of a site preparation program.

Use LESCO Pre-M AquaCap Herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate in any noncropland area such as railroad, utility, highway, and pipeline rights-of-way; highway guardrails, delineators, and sign posts; bridge abutments and approaches; utility substations; petroleum tank farms; pumping installations; storage areas; fence rows; windbreaks and shelterbelts; paved or gravel surfaces; and established wildflower plantings where weed control is desired.

LESCO Pre-M AquaCap Herbicide can also be used in bulb plantings, nonbearing fruit and nut tree nurseries, conifer and hardwood seedling nurseries, and tree plantations for site preparation and maintenance. Applications can be made, but are not limited to, plant species listed on this label such as trees, shrubs, groundcovers, perennials, bulbs, ornamental grasses, and bedding plants.

**LESCO Pre-M AquaCap Herbicide** can be used **in and around field, liner, and container ornamental production**.

## **Application Instructions**

**LESCO Pre-M AquaCap Herbicide** will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or **LESCO Pre-M AquaCap Herbicide** may be used with herbicides registered for postemergence use in managed turf sites, landscape ornamentals, and in other noncropland areas. Consult the labels of those herbicides for suggested treatments, rates, and precautions or restrictions for use in these areas. The efficacy of **LESCO Pre-M AquaCap Herbicide** will improve if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. If **LESCO Pre-M AquaCap Herbicide** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.



Applied according to label directions and under normal growing conditions, LESCO Pre-M AquaCap Herbicide or LESCO Pre-M AquaCap Herbicide tank mix combinations will not cause crop injury. Or soil residues, under application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants and increase the possibility of plant damage from **LESCO Pre-M AquaCap Herbicide**.

## **Mixing Instructions**

**LESCO Pre-M AquaCap Herbicide** may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to **LESCO Pre-M AquaCap Herbicide** alone.

When using tank mixtures or sequential applications with LESCO Pre-M AquaCap Herbicide, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Before mixing LESCO Pre-M AquaCap Herbicide or LESCO Pre-M AquaCap Herbicide tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

#### LESCO Pre-M AquaCap Herbicide Alone

When using LESCO Pre-M AquaCap Herbicide alone, add LESCO Pre-M AquaCap Herbicide to the partially filled tank while agitating; then fill the remainder of the tank with water or liquid fertilizer.

#### LESCO Pre-M AquaCap Herbicide Tank Mixes

Add the tank mixture ingredients in the following order:

- Wettable Powder (WP) formulations Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- Dry Flowable/Water Dispersible Granule (DF/WDG) formulations - Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- 3. **Flowable (F) formulations** Add the F formulation to the partially filled tank while agitating.
- Add LESCO Pre-M AquaCap Herbicide to the partially filled tank while agitating.
- Water-soluble Concentrate (WSC) formulations Add the WSC formulation to the partially filled tank while agitating.
- Emulsifiable Concentrate (EC) formulations Add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

Maintain continuous agitation while adding herbicides and until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed.

#### **Backpack Sprayer**

Begin with a clean spray tank. Fill the spray tank 1/2 full with clean water and add the required amount of **LESCO Pre-M AquaCap Herbicide** to the sprayer. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate once again.

During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed.

#### **Liquid Fertilizers**

Before mixing, always test small quantities with a simple jar test. Add the required amount of **LESCO Pre-M AquaCap Herbicide** to a half-filled spray tank while agitating; then add the fertilizer product. Complete filling spray tank to desired level.

## **Spraying Instructions**

#### **Ground Application**

Uniformly apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area with a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 to 200 gpa for professional turfgrass, landscape and ornamental applications, and 10 to 200 gpa for all other noncrop applications such as roadsides, utility rights-of-way, or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid unintentional contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed. Treated turfgrass should be dry before entering to avoid staining onto nontreated surfaces.

### **Aerial Application**

Uniformly apply in 5 or more gallons of water per acre. Exercise caution to minimize drift. **DO NOT** apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.

#### MANAGING OFF-TARGET MOVEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial application to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees.

Observe more stringent state regulations, if applicable. The applicator should be familiar with and take into account the information covered in the aerial drift reduction advisory information.

#### Information On Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see WIND; TEMPERATURE AND HUMIDITY; and TEMPERATURE INVERSIONS).



#### Controlling droplet size:

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure DO NOT exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **Boom Length**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

### **Application Height**

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

**NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing that causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or nontarget crops) is minimal (e.g. when wind is blowing away from sensitive areas).

## **Turfgrass**

Use LESCO Pre-M AquaCap Herbicide for preemergence control of grasses and certain broadleaf weed species as they germinate in any turfgrass site (golf courses, lawns, sod farms and other turf areas) and landscape ornamental maintenance areas. Examples of such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas, and and farms

The efficacy of **LESCO Pre-M AquaCap Herbicide** will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. If **LESCO Pre-M AquaCap Herbicide** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

To prevent establishment of weeds along the edges of treated area, it may be necessary to overlap the spray 3 to 6 inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is to be avoided, **DO NOT** rub or scrub surface. Rinse area immediately using a heavy spray of water to avoid staining. Treated turfgrass should be dry before entering to avoid staining onto nontreated surfaces.

#### **Turfgrass Tank Mixes**

**LESCO Pre-M AquaCap Herbicide** can be mixed with postemergence herbicides to control emerged weeds in nonresidential turfgrass. For annual grass control, applications can be made with **Drive® 75 DF herbicide**, **Drive® XLR8 herbicide**, or MSMA to control emerged weeds

Broadleaf weeds can be controlled using **Trimec® herbicide**, **Three-Way<sup>TM</sup> herbicide**, 2-4,D and other similar products.

Before tank mixing, use a simple jar test to ensure compatibility of herbicides.

Refer to manufacturer's labels for specific use directions, precautions, and limitations before tank mixing with LESCO Pre-M AquaCap Herbicide. Follow those that are most restrictive.

## **Turfgrass Restrictions**

- Use on well-established turfgrass with a dense and uniform stand. On turf that has been thinned or damaged due to winter injury, excessive moisture, etc., allow for turf recovery before application.
- On newly planted areas, application should not be made until the turfgrass has filled in and has been mowed at least four times. Applications made to overseeded warm-season turfgrass may cause thinning or injury of the overseeded species.
- DO NOT use on bentgrass or Poa annua greens and tees or injury may occur.
- Delay reseeding or winter overseeding treated turfgrass for at least three (3) months following the last LESCO Pre-M AquaCap Herbicide application.
- Delay sprigging turfgrass for five (5) months after application.



Table 2. LESCO Pre-M AquaCap Herbicide Residential, Golf Course, Commercial, and Other Nonresidential Turfgrass Uses for Preemergence Weed Control<sup>1</sup>

Cool Season Turfgrass	Weed	Product per 1000 sq ft (fl ozs)	Product per acre (pts)	Comment
Bluegrass, Kentucky Fescue, fine Fescue, tall Ryegrass, perennial	barnyardgrass crabgrass evening primrose fall panicum foxtail hop clover knotweed oxalis Poa annua prostrate spurge purslane	All Turf Uses: 1.1 to 1.6 Initial application b germination in spri		Apply a repeat application of 2.2 to 3.1 pts/A (0.86 to 1.1 fl ozs/1000 sq ft) after 5 to 8 weeks for extended control or where heavy weed infestations are expected.
	goosegrass	Residential and Suses Only <sup>2</sup> : 1.1 to 1.6  Golf Course, Cornoresidential To 1.1 to 2.3  Initial application be germination in spri	3.1 to 4.2  mmercial and Other urf Uses Only: 3.1 to 6.3  pefore weed	Apply a repeat application of 3.1 pts/A (1.1 fl ozs/1000 sq ft) if the lower rate was used initially or for extended goosegrass control after 5 to 8 weeks.
	chickweed corn speedwell cudweed henbit lawn burweed Poa annua	<b>All Turf Uses:</b> 1.1 to 1.6	3.1 to 4.2	Apply in late summer or early fall before weed germination. Apply a repeat application of 3.1 to 4.2 pts/A (1.1 to 1.6 fl ozs/1000 sq ft) after 5 to 8 weeks for extended <i>Poa annua</i> control.
Bentgrass or established <i>Poa annua</i> ³ (1/2-inch high or taller)	barnyardgrass crabgrass evening primrose fall panicum foxtail hop clover knotweed oxalis Poa annua prostrate spurge purslane	All Turf Uses (Non-greens and 1.1 Initial application b germination in spri	3.1 pefore weed	Apply a repeat application of 2.2 to 3.1 pts/A (0.86 to 1.1 fl ozs/1000 sq ft) after 5 to 8 weeks for extended control or where heavy weed infestations are expected.
	goosegrass	All Turf Uses (Non-greens and 1.1 Initial application b germination in spri	3.1 refore weed	Apply a repeat application of 3.1 pts/A (1.1 fl ozs/1000 sq ft) for extended goosegrass control after 5 to 8 weeks.
	chickweed corn speedwell cudweed henbit lawn burweed Poa annua	All Turf Uses (Non-greens and 1.1 to 1.6	1 <b>Tees):</b> 3.1 to 4.2	Apply in late summer or early fall before weed germination.



Table 2. LESCO Pre-M AquaCap Herbicide Residential, Golf Course, Commercial, and Other Nonresidential Turfgrass Uses for Preemergence Weed Control<sup>1</sup> (continued)

Warm Season Turfgrass	Weed	Product per 1000 sq ft (fl ozs)	Product per acre (pts)	Comment
Bahiagrass Bermudagrass Buffalograss Centipedegrass Fescue, tall Paspalum, seashore St. Augustinegrass Zoysiagrass	barnyardgrass crabgrass evening primrose fall panicum	Residential and S Uses Only: 1.1 to 1.6	Sod Farm Turf 3.1 to 4.2	Apply a repeat application of 2.2 to 3.1 pts/A (0.86 to 1.1 fl ozs/1000 sq ft) after 5 to 8 weeks if necessary.
	foxtail hop clover knotweed	Golf Course, Cor Nonresidential To 1.1 to 2.3	nmercial and Other urf Uses Only: 3.1 to 6.3	
	oxalis <i>Poa annua</i> prostrate spurge purslane	Initial application before weed germination in spring		
	goosegrass	All Turf Uses (Non-greens and 1.1	<b>Tees):</b> 3.1	An additional application of 3.1 pts/A (1.1 fl ozs/1000 sq ft) may be made for extended goosegrass control 8 weeks after the second application.
		Apply before weed germination in spring.		
			oplication at 3.1 pts/A q ft) 5 to 8 weeks later.	
	chickweed corn speedwell cudweed henbit lawn burweed Poa annua	<b>All Turf Uses:</b> 1.1 to 1.6	3.1 to 4.2	Apply in late summer or early fall before weed germination. Apply a repeat application of 3.1 to 4.2 pts/A (1.1 to 1.6 fl ozs/1000 sq ft) after 5 to 8 weeks for extended <i>Poa annua</i> control.

DO NOT exceed a maximum of 4.2 pints (2.1 quarts)/A or 1.6 fl ozs/1000 sq ft product **per application** for use on residential and sod farm turfgrass. **DO NOT** exceed a maximum rate of 6.3 pints (3.1 quarts)/A or 2.3 fl ozs/1000 sq ft product **per application** for use on golf course turfgrass, commercial, or other nonresidential turfgrass.



<sup>&</sup>lt;sup>2</sup> Residential is defined as turf in any residential situation as well as home lawns, schools, parks, and playgrounds.

 $<sup>^{\</sup>mbox{\tiny 3}}$  DO NOT use on bentgrass or Poa annua greens or tees.

#### **Handheld Spray Equipment Application**

Use Table 2. LESCO Pre-M AquaCap Herbicide Residential, Golf Course, Commercial, and Other Nonresidential Turfgrass Uses for Preemergence Weed Control to determine the amount of LESCO Pre-M AquaCap Herbicide to apply per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other handheld equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in Mixing Instructions section of this label.

#### Weeds Controlled

LESCO Pre-M AquaCap Herbicide will not control established weeds. If weeds should germinate before activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. LESCO Pre-M AquaCap Herbicide may be used with herbicides registered for postemergence application (i.e. Roundup® herbicide) for control of established weeds. DO NOT apply sprays containing Roundup or Finale over the top of desirable plants. A LESCO Pre-M AquaCap Herbicide treatment may be followed by any registered herbicide to control weeds not listed on the LESCO Pre-M AquaCap Herbicide label.

## **Landscape and Grounds Maintenance**

**LESCO Pre-M AquaCap Herbicide** can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds. Areas to be treated, such as mulch beds, parking areas and roadsides, fencelines and borders, and around statuary or monuments, should be free of emerged weeds before application. To remove emerged weeds, either cultivate or tank mix **LESCO Pre-M AquaCap Herbicide** with a postemergence product labeled for such use.

Not all ornamental species or cultivars of species can be tested for plant safety. Refer to the list of ornamental plant species found in this label (Table 4. Tolerant Ornamental Species). LESCO Pre-M AquaCap Herbicide may be used on plant species not listed on this label; however, testing a small number plants at the specified rate and evaluating for suitability before a broad-use application is advised. Refer to Table 3. Weed Control in All Nonturfgrass Sites for application rates. Avoid unintentional contact of spray solution with stone, wood, or other porous surfaces because staining may occur. Rinse surfaces immediately using a heavy spray of water to avoid staining.

#### Table 3. Weed Control in All Nonturfgrass Sites\*

For preemergence control of the weed species listed, apply **LESCO Pre-M AquaCap Herbicide** at the specified rates:

Length of Control (months)	LESCO Pre-M AquaCap Herbicide (qts/A)	Required to Treat 1000 sq ft (fl ozs)
Short term (2 to 4)	2.1	1.6
Long term (6 to 8)	4.2	3.2

<sup>\*</sup>For all turfgrass weed control rates, refer to Table 2. LESCO Pre-M AquaCap Herbicide Residential, Golf Course, Commercial, and Other Nonresidential Turfgrass Uses for Preemergence Weed Control.

For extended weed control, repeat applications of **LESCO Pre-M AquaCap Herbicide** can be made.

# Ornamental Plantings and Tree Plantations including Noncropland Areas

Use LESCO Pre-M AquaCap Herbicide for grounds maintenance in noncropland areas, for preemergence control of the weed species listed in and around established tree plantations for site preparation, and for maintenance of conifer and hardwood seedling nurseries and pulpwood and fiber farms. LESCO Pre-M AquaCap Herbicide may be used for hardwood and conifer regeneration on conservation reserve program land. LESCO Pre-M AquaCap Herbicide can also be used in Christmas trees and nonbearing fruit and nutcrops and vineyards established, or bulb and wildflower field plantings, in and around established ornamentals planted in noncropland areas such as highway rights-of-way and utility substations. Refer to Table 3. Weed Control in All Nonturfarass Sites for application rates.

#### Applications at Planting or to Established Trees

When applying at planting, it is important to achieve slit closure to prevent LESCO Pre-M AquaCap Herbicide from directly contacting the tree roots or being washed into the root zone via the open slit, or root stunting may occur. Refer to Landscape and Ornamental Plantings Instructions and Restrictions chart before application.

For postemergence weed control, tank mix combinations of LESCO Pre-M AquaCap Herbicide plus Segment™ herbicide, Roundup⁰ herbicide, Finale⁰ herbicide, or other labeled herbicides are recommended. Refer to approved labeling for species recommendations. Determine rates for tank mix compounds from the product labels of LESCO Pre-M AquaCap Herbicide and partner herbicides before use. Use caution to prevent combination sprays from direct contact with desirable foliage or injury may result. LESCO Pre-M AquaCap Herbicide plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict LESCO Pre-M AquaCap Herbicide use in sensitive areas. Refer to manufacturer's labels for specific use directions, precautions, and limitations before application and follow those that are most restrictive.

#### **Ornamental Bulbs**

LESCO Pre-M AquaCap Herbicide may be applied for control of susceptible annual weeds in ornamental bulbs listed in the Perennials section in Table 4. Tolerant Ornamental Species (crocus, daffodil [narcissus], gladiolus, lily, tulip, etc.). Apply LESCO Pre-M AquaCap Herbicide before, during, or after bulb emergence. If weeds have already germinated, add a labeled postemergence herbicide to control emerged weeds.

#### Wildflowers

LESCO Pre-M AquaCap Herbicide may be applied for control of susceptible annual weeds in plantings of wildflowers listed in the Perennials section in Table 4. Tolerant Ornamental Species. The perennial species noted (black-eyed Susan, California poppy, coreopsis, oxeye daisy, etc.) have been evaluated for plant tolerance to applications of LESCO Pre-M AquaCap Herbicide at 4.2 pints (2.1 quarts) per acre. LESCO Pre-M AquaCap Herbicide may be applied to established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply LESCO Pre-M AquaCap Herbicide no sooner than 4 weeks after wildflowers have emerged, but before weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds. Refer to all label restrictions before application.



Due to the diversity of species and varieties that exist in areas where wildflowers are grown, the response to **LESCO Pre-M AquaCap Herbicide** may vary greatly. Careful testing on desirable species is recommended to determine if area-wide applications can be made.

#### Nonbearing Fruit and Nutcrops and Vineyards

**LESCO Pre-M AquaCap Herbicide** may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following nonbearing crops:

Almond	Olive
Apple	Peach
Apricot	Pear
Cherry	Pecan
Citrus	Pistachio
Fig	Plum
Grape	Prune

Nectarine Walnut, English

#### Noncropland

Use LESCO Pre-M AquaCap Herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way; highway guardrails, delineators, and sign posts; utility substations, petroleum tank farms, pumping installations, fence rows, storage areas, windbreaks and shelterbelts.

### Industrial (Unimproved) Turf

**LESCO Pre-M AquaCap Herbicide** will provide preemergence control of the annual grasses and broadleaf weeds listed in **Table 1. Weeds Controlled** that might germinate in established grass in rights-of-way, roadsides, construction sites, parks, substations, or lots.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, **Drive® 75 DF herbicide**, **Drive® XLR8 herbicide**, **Segment™ herbicide**, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

#### **Total Vegetation Control**

LESCO Pre-M AquaCap Herbicide may be tank mixed with Arsenal® herbicide, Sahara® DG herbicide, Plateau® herbicide, Segment, Roundup PRO® herbicide, Karmex® herbicide, Finale® herbicide, Oust® herbicide, diuron, glyphosate or other products to provide bareground or total vegetation control. LESCO Pre-M AquaCap Herbicide can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. DO NOT tank mix with Arsenal, Sahara DG, or Plateau herbicides in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions.

For kochia control, combinations of **LESCO Pre-M AquaCap Herbicide** with **Arsenal** or diuron are recommended if control has been a problem for other herbicides.

#### Landscape and Ornamental Plantings Instructions and Restrictions<sup>1</sup>

Site	Application Instructions and Restrictions
Landscape plantings <sup>2</sup>	DO NOT apply to newly transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.
	Apply as a directed or over-the-top spray.
	Use the lowest labeled rate when making applications to annuals. Repeat applications can be made for extended landscape weed control.
Ornamental bulbs <sup>3</sup>	LESCO Pre-M AquaCap Herbicide     may be applied to bulb species listed     on the label.
	2. Apply before bulb emergence.
Wildflowers <sup>3</sup>	LESCO Pre-M AquaCap Herbicide     may be applied in plantings of     wildflowers listed on the label. Refer to     specific instructions for rate and plant     tolerance.
	For wildflowers being established from seed, apply at 4 weeks after wildflowers have germinated, but before weed seed germination.

<sup>1</sup>Plant only those desirable plant species listed on this label into soil treated the previous season with **LESCO Pre-M AquaCap Herbicide** or injury may occur.

- Before treating a large number of plants, spray a few plants and observe for 1 to 2 months for plant damage before full-scale application.
- <sup>3</sup> **DO NOT** treat plants grown for food or feed. **DO NOT** use treated plants for food or feed.

## **Spraying Instructions**

#### Ground Application

Uniformly apply with properly calibrated ground equipment in suggested spray volumes of 20 to 200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid unintentional contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water.

Handheld Spray Equipment Application. Use Table 3. Weed Control in All Nonturfgrass Sites to determine the amount of LESCO Pre-M AquaCap Herbicide to apply per 1000 square feet. The amount of water used for application is not critical, but should be sufficient for thorough coverage without runoff. Calibration of backpack or other handheld equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in the Mixing Instructions section of this label.



#### **Aerial Application**

Uniformly apply in 5 or more gallons of water per acre. Exercise caution to minimize drift. **DO NOT** apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.

#### Weeds Controlled

**LESCO Pre-M AquaCap Herbicide** will not control established weeds. If weeds germinate before herbicide activation, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow.

Use LESCO Pre-M AquaCap Herbicide with herbicides registered for postemergence application (i.e. Roundup® herbicide or Finale® herbicide) for control of established weeds. DO NOT apply sprays containing Roundup or Finale over the top of desirable plants. A LESCO Pre-M AquaCap Herbicide treatment may be followed by any registered herbicide to control weeds not listed on the LESCO Pre-M AquaCap Herbicide label.

The efficacy of LESCO Pre-M AquaCap Herbicide will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if LESCO Pre-M AquaCap Herbicide is not activated by rainfall or irrigation within 30 days.

#### **Commercial Ornamental Production**

#### Application Use Sites

**LESCO Pre-M AquaCap Herbicide** can be used in and around field, liner, and container ornamental production.

LESCO Pre-M AquaCap Herbicide sprays are safe around and over the top of the established plants listed in Table 4. Tolerant Ornamental Species. However, not all varieties or strains of the plant species listed have been tested. Refer to ornamental instructions and restrictions in this label before any application of LESCO Pre-M AquaCap Herbicide. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use, or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage before full-scale application.

### **Application Instructions**

**LESCO Pre-M AquaCap Herbicide** will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or use **LESCO Pre-M AquaCap Herbicide** with herbicides registered for postemergence use in ornamentals and vegetation control sites. Consult the labels of those herbicides for suggested treatments, rates, and precautions or restrictions for use in these areas.

The efficacy of LESCO Pre-M AquaCap Herbicide will improve if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. If LESCO Pre-M AquaCap Herbicide is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, LESCO Pre-M AquaCap Herbicide or LESCO Pre-M AquaCap Herbicide tank mix combinations will not cause crop injury. Overapplication can result in crop-stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants and increase the possibility of plant damage from **LESCO Pre-M AquaCap Herbicide**.

#### **Spraying Instructions**

#### **Ground Application**

Uniformly apply with properly calibrated ground equipment in suggested spray volumes of 20 to 200 gpa for ornamental applications to uniformly treat the area with a spray pressure of 25 to 50 psi. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Avoid unintentional contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed using a heavy spray of water.

Handheld Spray Equipment Application. Use Table 3. Weed Control in All Nonturfgrass Sites to determine the amount of LESCO Pre-M AquaCap Herbicide to apply per 1000 square feet. The amount of water used for application is not critical, but should be sufficient for thorough coverage without runoff. Calibration of backpack or other handheld equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in the Mixing Instructions section of this label

#### **Aerial Application**

Uniformly apply in 5 or more gallons of water per acre. Exercise caution to minimize drift. **DO NOT** apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.



### Production Ornamentals Instructions and Restrictions<sup>1</sup>

Site	Application Instructions and Restrictions
Newly transplanted field-grown nursery stock <sup>2, 3</sup>	DO NOT make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field.
	DO NOT apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where LESCO Pre-M AquaCap Herbicide could come into contact with the roots.
	DO NOT apply during bud swell, bud break, or at time of first flush of new growth.
	Direct sprays away from grafted or budded tissue on transplants at all times.
Ornamental bulbs <sup>3</sup>	LESCO Pre-M AquaCap Herbicide     may be applied to bulb species listed     on the label.
	2. Apply before bulb emergence.
Newly transplanted container-grown nursery stock <sup>2,3</sup>	DO NOT apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where LESCO Pre-M AquaCap Herbicide could come into contact with the roots.
	For container-grown ornamentals, delay first application of the product to bareroot liners for two (2) weeks after transplanting.
	DO NOT apply during bud swell, bud break, or at time of first flush of new growth.
	Direct sprays away from grafted or budded tissue on transplants at all times.
Established container or field-grown nursery stock <sup>2, 3</sup>	DO NOT apply during bud swell, bud break, or at time of first flush of new growth.
	Apply as a directed or over-the-top spray.
	If newly budded or grafted rootstock, apply with a shielded sprayer.
	Take care to ensure there are no cracks in the soil where LESCO Pre-M AquaCap Herbicide could come into contact with the roots.

# Production Ornamentals Instructions and Restrictions (continued)

Site	Application Instructions and Restrictions
Bareground for container placement	Apply to soil (including mulch, gravel, wood chips, or other permeable base); then water in. Replace containerized ornamentals onto pad.
Greenhouses, shadehouses, or other enclosed structures	<b>DO NOT</b> apply in greenhouses, shadehouses, or other enclosed structures.

- <sup>1</sup> Plant only those desirable plant species listed on this label into soil treated the previous season with LESCO Pre-M AquaCap Herbicide or injury may occur.
- <sup>2</sup> Before treating a large number of plants, spray a few plants and observe for 1 to 2 months for plant damage before full-scale application.
- <sup>3</sup> DO NOT treat plants grown for food or feed. DO NOT use treated plants for food or feed.

Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for application rates.

#### **Ornamental Tank Mixes**

Emerged weeds in ornamentals can be controlled using tank mixes containing Segment™ herbicide, Roundup⁰ herbicide, Finale⁰ herbicide, Ornamec⁰ herbicide, Gallery⁰ herbicide, Princep⁰ herbicide, and other similar products. DO NOT apply sprays containing Roundup or Finale over the top of ornamental plants.

Before tank mixing, use a simple jar test to ensure compatibility of herbicides.

Refer to manufacturer's labels for specific use directions, precautions, and limitations before tank mixing with LESCO Pre-M AquaCap Herbicide. Follow those that are most restrictive.

#### **Christmas Tree Plantations**

Use LESCO Pre-M AquaCap Herbicide in and around Christmas tree plantations. Apply LESCO Pre-M AquaCap Herbicide at planting or to established trees. When applying at planting, it is important to achieve slit closure to prevent LESCO Pre-M AquaCap Herbicide from directly contacting the tree roots or being washed into the root zone via the open slit or root stunting may occur.

For postemergence weed control, tank mix combinations of LESCO Pre-M AquaCap Herbicide plus Segment, Roundup, Finale, or other labeled herbicides are recommended. Refer to approved labeling for species recommendations. Determine rates for tank mix combinations from the product labels of LESCO Pre-M AquaCap Herbicide and partner herbicides before use. Use caution to prevent combination sprays from direct contact with desirable foliage or injury may result. LESCO Pre-M AquaCap Herbicide plus diuron or simazine combinations will broaden weed control spectrum; however, use of combinations may restrict LESCO Pre-M AquaCap Herbicide use in sensitive areas. Refer to manufacturer's labels for specific use directions, precautions, and limitations before application. Follow those that are most restrictive. Refer to Table 3. Weed Control in All Nonturfgrass Sites for LESCO Pre-M AquaCap Herbicide application rates.



#### Vegetation Control in Ornamental Production

Use LESCO Pre-M AquaCap Herbicide for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as sign posts, pumping installations, fence rows, storage areas, and windbreaks and shelterbelts. LESCO Pre-M AquaCap Herbicide may be tank mixed with Segment™ herbicide, Roundup PRO® herbicide, Karmex® herbicide, Finale® herbicide, diuron, glyphosate or other products to provide bareground or total vegetation control. LESCO Pre-M AquaCap Herbicide can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. Applications may be made to existing weeds controlled by the partner herbicide. Determine rates from the product labels before use. Follow the most restrictive label instructions. Refer to Table 3. Weed Control in All Nonturfgrass Sites for LESCO Pre-M AquaCap Herbicide application rates.

#### **Weeds Controlled**

LESCO Pre-M AquaCap Herbicide will not control established weeds. If weeds germinate before herbicide activation, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. LESCO Pre-M AquaCap Herbicide may be used with herbicides registered for postemergence application (i.e. Roundup® herbicide or Finale) for the control of established weeds. DO NOT apply sprays containing Roundup or Finale over the top of desirable plants. A LESCO Pre-M AquaCap Herbicide treatment may be followed by any registered herbicide to control weeds not listed on the LESCO Pre-M AquaCap Herbicide label.

The efficacy of LESCO Pre-M AquaCap Herbicide will be improved if the application is followed by 1/2 inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if LESCO Pre-M AquaCap Herbicide is not activated by rainfall or irrigation within 30 days.

**LESCO Pre-M AquaCap Herbicide** may be used on plant species not listed on this label. Determine the suitability for such uses by treating a small number of such plants at the specified rate. Evaluate treated plants 1 to 2 months following treatment for possible injury.

**LESCO Pre-M AquaCap Herbicide** sprays are safe around and over the top of the established plants listed in **Table 4. Tolerant Ornamental Species**. Refer to ornamentals instructions and restrictions before application. Refer to **Table 3. Weed Control in All Nonturfgrass Sites** for application rates.

**Table 4. Tolerant Ornamental Species** 

0 N	O-ititi- N		
Common Name	Scientific Name		
Bedding Plants			
Ageratum	Ageratum houstonianum		
Alyssum <sup>1</sup>	Alyssum saxatile		
Anemone, poppy-flowered	Anemone coronaria		
Artemesia	Artemesia spp.		
Balloonflower	Platycodon grandiflorum		
Begonia <sup>1</sup>	Begonia spp.		
Cabbage, ornamental	Brassica olereacea		
Caladium	Caladium spp.		
Cast-iron plant	Aspidistra elatior		
China aster¹	Callistephus chinensis		
Crocosmia, montebretia	Crocosmia x crocosmiiflora		
Dahlia <sup>1</sup>	Dahlia spp.		
Dianthus	Dianthus barbatus		
Dusty miller	Senecio cineraria		
Gayfeather	Liatris spp.		
Gazania, treasure flower	Gazania rigens		
Gazania, trailing	Gazania rigens leucolaena		
Gloxinia	Gloxinia simningia		
Kale, ornamental	Brassica napus		
Marigold, African	Tagetes erecta		
Moss rose <sup>1</sup>	Portulaca grandiflora		
Mum, garden	Chrysanthemum spp.		
Periwinkle <sup>1</sup>	Vinca major		
Periwinkle, rose	Catharanthus roseus		
Petunia <sup>1</sup>	Petunia spp.		
Plumosa cockscomb	Celosia cristata		
Portulaca <sup>1</sup>	Portulaca grandiflora		
Salvia <sup>1</sup>	Salvia splendens		
Snapdragon	Antirrhinum majus		
Statice <sup>1</sup>	Limonium spp.		
Sweet William	Dianthus barbatus		
Vinca <sup>1</sup>	Vinca major		
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Application of LESCO Pre-M AquaCap Herbicide should not be made sooner than four weeks after transplanting for these annuals. Use the lower labeled rate.



Common Name	Scientific Name	
Ground Covers		
Ajuga	Ajuga reptans	
Baby sun rose	Aptenia cordifolia	
Beach strawberry	Fragaria chiloensis	
Capeweed	Arctotheca calendula	
Cinquefoil, spring	Potentilla verna	
Coyotebrush, dwarf	Baccharis pitularis	
Daisy, trailing African	Osteospermum fruticosum	
Dymondia	Dymondia margaretae	
Bazania	Gazania splendens	
ceplant, large leaf	Carpobrotus edulis	
y, English	Hedera helix	
y, geranium	Pelargonium peltatum	
asmine, Asiatic	Trachelospermum asiaticum	
asmine, primrose	Jasminum mesnyi	
essamine, Carolina	Gelsemium sempervirens	
lanzanita, bearberry	Arctostaphylos uva-ursi	
liscanthus	Miscanthus spp.	
londograss	Ophiopogon japonica	
lorningglory	Convolvulus spp.	
lyoporum	Myoporum parviflolium	
achysandra	Pachysandra terminalis	
otentilla	Potentilla fruticosa	
led apple	Aptenia cordifolia	
losemary	Rosemarinus officinalis	
lose-of-Sharon	Hypericum calycinum	
t. Johnswort, creeping	Hypericum calycinum	
and strawberry	Fragaria chiloensis	
Sedum	Sedum spurium	
tonecrop	Sedum spurium	
erbena, Peruvian	Verbena peruviana	
/ervain	Verbena peruviana	
etch, crown	Vicia sativa	
/inca	Vinca minor	
Vintercreeper	Euonymous fortunei	

Table 4. Tolerant Ornamental Species (continued)

Common Name	Scientific Name	
Ornamental Grasses		
Beach grass	Ammophila breviligulata	
Fescue, blue	Festuca ovina	
Fescue, sheep	Festuca ovina	
Fountain grass	Pennisetum setaceum	
Pampas grass	Cortaderia selloana	
Reed canary grass	Phalaris arundinacea	
Reed, giant	Arundo spp.	
Ribbon grass	Phalaris arundinacea	
Tufted hair grass	Deschampsia caespitosa	





Table 4. Tolerant Ornamental Species (continue
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Common Name	Scientific Name	
Perennials		
Acacia	Acacia redolens	
Asparagus	Asparagus spp.	
Aster, New York	Aster novi-belgii	
Aster, Stokes	Stokesia laevis	
Astilibe (False spirea)	Astilibe spp.	
Avens	Geum triflorum	
Baby's breath	Gypsophila elegans	
Baby's breath	Gypsophila paniculata	
Beard-tongue	Penstemon spp.	
Bellflower	Campanula spp.	
Bellflower, willow	Campanula persicifolia	
Bird of paradise	Caesalpinia pulcherrima	
Black-eyed Susan <sup>1</sup>	Rudbeckia hirta	
Blanket flower <sup>1</sup>	Gaillardia aristata	
Blanket flower <sup>1</sup>	Gaillardia x grandiflora	
Bleeding heart	Dicentra spectabilis	
Butterfly weed	Asclepias tuberosa	
California poppy <sup>1</sup>	Eschscholzia california	
Calla lily	Zantedeschia aethiopica	
Canna, common garden	Canna generalis 'Lucifer'	
Carex	Carex spp.	
Chincherinchee	Ornithogalum thyrsoides	
Clover, crimson <sup>1</sup>	Trifolium incarnatum	
Columbine	Aquilegia 'McKana Giant'	
Columbine	Aquilegia x hybrida	
Coreopsis (Tickseed) <sup>1</sup>	Coreopsis lanceolata	
Crinum lily	Crinum spp.	
Crocus	Crocus spp.	
Daffodil (Narcissus)	Narcissus spp.	
Daylily	Hemerocallis spp.	
Fairy duster	Calliandra eriophylla	
Fern, asparagus	Asparagus officinalis	
Fern, Boston	Nephrolepis exaltata	
Fern, hay-scented	Dennstaedtia punctilobula	
Fern, leatherleaf <sup>2</sup>	Rumohra adiantiformis	
Fortnight lily	Moraea spp.	
Foxglove	Digitalis purpurea	
Freesia	Freesia x hybrida	
Gaillardia	Gaillardia pulchella	
Geum	Geum spp.	
Gladiolus	Gladiolus spp.	

Table 4. Tolerant Ornamental Species (continued)

Common Name	Scientific Name		
Perennials (continued)			
Heather, dwarf	Calluna vulgaris		
Hosta	Hosta spp.		
Indian blanket1	Gaillardia pulchella		
Iris, Japanese	Iris kaemphera		
Lantana, weeping	Lantana montevidensis		
Leopard's bane	Doronicum cordatum		
Lily	Lillium spp.		
Liriope, big blue	Liriope muscari		
Liriope, creeping	Liriope spicata		
Liriope, variegated	Liriope muscari		
Montbretia	Crocosmia crocosmiiflora		
Moonbeam	Coreopsis verticillata		
Mugwort, Western	Artemesia ludoviciana		
Nightshade	Solanum spp.		
Orchid, peacock	Acidanthera bicolor		
Oxeye daisy <sup>1</sup>	Chrysanthemum leucanthemum		
Palm, areca	Chysalidocarpus lutescens		
Palm, pygmy date	Phoenix roebelence		
Palm, Washington	Washington robusta		
Peony, Chinese	Paeonia lactiflora		
Purple coneflower <sup>1</sup>	Echinacea purpurea		
Purple gay-feather	Liatris pycnostachya		
Purple loosestrife	Lythrum virgatum		
Rodgersia	Rodgersia henricie		
Rosemary	Rosmarinus officinalis		
Sedge	Carex spp.		
Shasta daisy¹	Chrysanthemum x superbum		
Statice	Limonium latifolia		
Statice, German	Goniolimon tartaricum		
Sweet flag	Acorus calamus		
Tickseed <sup>1</sup>	Coreopsis lanceolata		
Texas bluebonnet	Lupinus texenis		
Tulip	Tulipa spp.		
Wonder flower	Ornithogalum thyrsoides		
Yarrow <sup>1</sup>	Achillea millefolium		
Zephyr lily	Zephyranthes spp.		

<sup>&</sup>lt;sup>1</sup> These plants have shown tolerance to **LESCO Pre-M AquaCap Herbicide** applications of 4.2 pints/A (2.1 quarts/A) in wildflower plantings established from seed.



<sup>&</sup>lt;sup>2</sup> Applications of LESCO Pre-M AquaCap Herbicide to immature ferns (during periods of new growth of fronds) may result in some injury.

Table 4.	Tolerant	Ornamental	<b>Species</b>	(continued)
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Common Name	Scientific Name
Shrubs	
Abelia, glossy	Abelia grandiflora
Alder, witch	Fothergilla gardenii
Aucuba, gold	Aucuba japonica
Azalea	Rhododendron sp.
Bamboo, heavenly	Nandina domestica
Barberry	Berberis gladwynensis
Barberry, Japanese	Berberis thunbergii
Blue indigo bush	Dalea gregii
Bottlebrush, lemon	Callistemon citrinus
Boxwood, common	Buxus sempervirens
Boxwood, Japanese	Buxus microphylla
Brittlebush	Encelia farinosa
Buttonbush	Cephalanthus occidentalis
Camellia	Camellia japonica
Cape jasmine	Gardenia jasminoides
Cassia, feathery	Cassia artemisioides
Cordyline	Cordyline spp.
forrea	Correa spp.
otoneaster	Cotoneaster apiculatus
otoneaster, bearberry	Cotoneaster dammeri
otoneaster, rock	Cotoneaster horizontalis
ypress, Italian	Cupressus sempervirens
Sypress, Leyland	Cupressocyparis leylandii
Peutzia, slender	Deutzia gracilis
logwood, red twig	Cornus sericea
laeagnus	Elaeagnus ebbingei
Escallonia	Escallonia fradesii
Euonymus	Euonymus fortunei
Euonymus, golden	Euonymus japonica
Euonymus, winged	Euonymus alata
Firethorn	Pyracantha coccinea
Forsythia, border	Forsythia intermedia
ragrant olive	Osmanthus fragrans
Fuchsia, California	Zauschineria californica
Gardenia	Gardenia jasminoides
Hawthorne, Indian	Raphiolepis indica
Hibiscus	Hibiscus syriacus

Table 4. Tolerant Ornamental Species (continued)

Common Name	Scientific Name		
Shrubs (continued)			
Holly, Chinese	llex cornuta		
Holly, Japanese	Ilex crenata		
Holly, Fosters	Ilex attenuata 'Fosteri'		
Holly, Savannah	Ilex attenuata		
Holly, Yaupon	llex vomitoria		
Honeysuckle, bush	Diervilla Ionicera		
Hopseed bush	Dodonaea viscosa		
Hopbush	Dodonaea viscosa		
Hydrangea	Hydrangea macrophylla		
Juniper	Juniperus sp.		
Juniper, Chinese	Juniperus chinensis v. pfitzer		
Juniper, shore	Juniperus conferta		
Juniper, trailing	Juniperus horizontalis		
Laurel, cherry	Prunus laurocerasus		
Laurel, mountain	Kalmia latifolia		
Laurel, Otto Luyken	Prunus laurocerasus		
Laurel, Schipka	Prunus schipkanensis		
Laurustinus	Viburnum tinus		
Lavender, English	Lavandula angustifolia		
Leucothoe	Leucothoe fontanesiana		
Leucothoe, coast	Leucothoe axillaris		
Lilac, cut-leaf	Syringa laciniata		
Lily-of-the-Nile	Agapanthus africanus		
Mahonia	Mahonia aquifolium		
Mock orange	Pittosporum tobira		
Myrtle, compact	Myrtus communis		
Myrtle, wax	Myrica cerifera		
Nandina	Nandina domestica		
Oleander	Nerium oleander		
Oregon grape	Mahonia aquifolium		
Osmanthus	Osmanthus fragrans		
Palm, European fan	Chamaerops humilis		
Palm, Mediterranean fan	Chamaerops spp.		
Phlox, prickly	Leptodactylon californicum		
Photinia, Fraser	Photinia x fraseri		
Pieris, Japanese	Pieris japonica		
Pine, Mugo	Pinus mugo		
Plum, Natal	Carissa grandiflora		
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Table 4.	<b>Tolerant</b>	<b>Ornamental</b>	<b>Species</b>	(continued)
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Common Name	Scientific Name
Shrubs (continued)	
Privet, California	Ligustrum ovalifolium
Privet, glossy	Ligustrum lucidum
Privet, variegated	Ligustrum sinensis
Privet, waxleaf	Ligustrum japonicum
Pyracantha	Pyracantha coccinea
Quince, flowering	Chaenomeles japonica
Ranger, Texas	Leucophyllum frutescens
Redroot	Ceanothus spp.
Rhododendron	Rhododendron spp.
Robira	Pittosporum tobira
Rose	Rosa spp.
Spice plant	Illicium parviflorum
Spiraea	Spiraea vanhouttei
Spiraea, Anthony Waterer	Spiraea x bumalda
Spiraea, Japanese	Spiraea japonica
Sweet bay	Laurus nobilis
Trumpet bush	Tecoma stans
Verbena, lemon	Aloysia triphylla
Viburnum	Viburnum suspensum
Vitex	Vitex spp.
Weigela	Weigela florida
Wild lilac	Ceanothus spp.
Wisteria	Wisteria spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew¹	Taxus media
Yew, Japanese <sup>1</sup>	Taxus cuspidata
Yew, Southern¹	Podocarpus macrophyllus
Yucca, Adam's needle	Yucca filamentosa
Yucca, weeping	Yucca pendula

<sup>&</sup>lt;sup>1</sup> Applications of LESCO Pre-M AquaCap Herbicide should not be made during spring growth or injury to terminals may occur.

Table 4. Tolerant Ornamental Species (continued)

Alder, European black Apple Alder, European black Apple Alder, European black Apple Alder, European black Apple Alder, Spp. Arborvitae, American Arbutus Arbutus Arbutus spp. Ash, red Fraxinus pennsylvanica Ash, white Fraxinus americana Aspen, bigtooth Populus grandidentata Aspen, quaking Populus tremuloides Basswood Tilia spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria, Japanese cedar Cryptomeria, Japanese cedar Cypress, Leyland Dogwood, flowering Cornus florida Dogwood, silky Cornus amonum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, pouglas Fraser Abies concolor Franklinia Franklinia pp. Fringe tree Chlonenthus retusus Ginkgo Ginkgo biloba	Common Name	Scientific Name	
Apple Malus spp. Arborvitae, American Thuja occidentalis Arbutus Apple Fraxinus pennsylvanica Ash, white Fraxinus americana Aspen, bigtooth Populus grandidentata Aspen, pigtooth Populus grandidentata Aspen, quaking Populus tremuloides Basswood Tilia spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, shrub Cornus spp. Dogwood, shrub Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Trees		
Arborvitae, American  Arbutus  Arbutus spp.  Ash, red  Ash, white  Aspen, bigtooth  Aspen, quaking  Birch, European weeping  Buckeye, red  Cherry, black  Cherry, Choke  Crabapple  Cherry, Nanking  Crabapple  Crape myrtle  Crape myrtle  Cryptomeria, Japanese cedar  Cypress, Leyland  Dogwood, sirub  Dogwood, sirub  Dogwood, sirub  Dogwood, silky  Emuse arbirolize  Elin, bries  Erin, Daus arbirolize  Erin, Daus arbirolize  Arbutus spp.  Fringe tree  Chlonenthus retusus  Fraxinus americana  Arbutus spp.  Fringe tree  Chanaerypanis pendula  Fraxinus americana  Arbutus spp.  Betula pendula  Fraxinus americana  Abies braseri  Franklinia spp.  Fringe tree  Chlonenthus retusus	Alder, European black	Alnus glutinosa	
Arbutus Arbutus spp. Ash, red Fraxinus pennsylvanica Ash, white Fraxinus americana Aspen, bigtooth Populus grandidentata Aspen, quaking Populus tremuloides Basswood Tilia spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, Sirub Cornus spp. Dogwood, sirub Cornus spp. Dogwood, sirub Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Apple	Malus spp.	
Ash, red Fraxinus pennsylvanica Ash, white Fraxinus americana Aspen, bigtooth Populus grandidentata Aspen, quaking Populus tremuloides Basswood Tilia spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, shrub Cornus spp. Dogwood, shrub Cornus amemum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Arborvitae, American	Thuja occidentalis	
Ash, white Fraxinus americana Aspen, bigtooth Populus grandidentata Aspen, quaking Populus tremuloides Basswood Tilia spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, Silky Cornus amonum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Arbutus	Arbutus spp.	
Aspen, bigtooth Populus grandidentata Aspen, quaking Populus tremuloides Basswood Tilla spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, shrub Cornus spp. Dogwood, shrub Cornus amonum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Ash, red	Fraxinus pennsylvanica	
Aspen, quaking Populus tremuloides Basswood Tilia spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, shrub Cornus spp. Dogwood, shrub Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Ash, white	Fraxinus americana	
Basswood Tilia spp. Birch, European weeping Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Aspen, bigtooth	Populus grandidentata	
Birch, European weeping Birch, river Betula pendula Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria, Japanese cedar Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, shrub Cornus spp. Dogwood, shrub Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies concolor Franklinia Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Aspen, quaking	Populus tremuloides	
Birch, river Betula nigra Buckeye, red Aesculus pavia Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Basswood	Tilia spp.	
Buckeye, red  Aesculus pavia  Cedar, white  Thuja occidentalis  Chamaecyparis, Boulevard  Cherry, black  Prunus serotina  Cherry, choke  Prunus virginiana  Cherry, Kwanzan  Prunus serrulata  Cherry, Nanking  Prunus tomentosa  Cottonwood  Populus deltoides  Crabapple  Malus spp.  Crape myrtle  Lagerstroemia indica  Cryptomeria, Japanese cedar  Cyptomeria, Japanese cedar  Cypress, Leyland  Cupressocyparis leylandii  Dogwood, flowering  Dogwood, shrub  Cornus spp.  Dogwood, silky  Cornus amomum  Elm  Ulmus japonica  Elm, winged  Ulmus alata  Eucalyptus (Silver-dollar) tree  Eucalyptus cinerea  Fir, Douglas  Pseudotsuga menziesii  Fir, Fraser  Abies concolor  Franklinia  Franklinia spp.  Fringe tree  Chlonenthus retusus	Birch, European weeping	Betula pendula	
Cedar, white Thuja occidentalis Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, Korean Cornus kousa Dogwood, shrub Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Birch, river	Betula nigra	
Chamaecyparis, Boulevard Chamaecyparis pisifera Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, Korean Cornus kousa Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Buckeye, red	Aesculus pavia	
Cherry, black Prunus serotina Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, Korean Cornus kousa Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Cedar, white	Thuja occidentalis	
Cherry, choke Prunus virginiana Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, Korean Cornus kousa Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Chamaecyparis, Boulevard	Chamaecyparis pisifera	
Cherry, Kwanzan Prunus serrulata Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandli Dogwood, flowering Cornus florida Dogwood, Korean Cornus kousa Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Cherry, black	Prunus serotina	
Cherry, Nanking Prunus tomentosa Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandli Dogwood, flowering Cornus florida Dogwood, Korean Cornus kousa Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Cherry, choke	Prunus virginiana	
Cottonwood Populus deltoides Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Comus florida Dogwood, Korean Comus kousa Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Cherry, Kwanzan	Prunus serrulata	
Crabapple Malus spp. Crape myrtle Lagerstroemia indica Cryptomeria, Japanese cedar Cryptomeria japonica Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Cornus florida Dogwood, Korean Cornus kousa Dogwood, shrub Cornus spp. Dogwood, silky Cornus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies fraseri Fir, white Abies concolor Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Cherry, Nanking	Prunus tomentosa	
Crape myrtle  Crape myrtle  Cryptomeria, Japanese cedar  Cryptomeria japonica  Crypress, bald  Cupress, Leyland  Cupressocyparis leylandii  Dogwood, flowering  Comus florida  Dogwood, Korean  Comus kousa  Dogwood, shrub  Comus spp.  Dogwood, silky  Comus amomum  Elm  Ulmus japonica  Elm, winged  Ulmus alata  Eucalyptus (Silver-dollar) tree  Eucalyptus cinerea  Fir, balsam  Abies balsamae  Fir, Douglas  Pseudotsuga menziesii  Fir, Fraser  Abies concolor  Franklinia  Franklinia  Franklinia spp.  Fringe tree  Chlonenthus retusus	Cottonwood	Populus deltoides	
Cryptomeria, Japanese cedar Cypress, bald Taxodium distichum Cypress, Leyland Cupressocyparis leylandii Dogwood, flowering Comus florida Dogwood, Korean Comus spp. Dogwood, shrub Comus amomum Elm Ulmus japonica Elm, winged Ulmus alata Eucalyptus (Silver-dollar) tree Eucalyptus cinerea Fir, balsam Abies balsamae Fir, Douglas Pseudotsuga menziesii Fir, Fraser Abies concolor Franklinia	Crabapple	Malus spp.	
Cypress, bald Taxodium distichum  Cypress, Leyland Cupressocyparis leylandii  Dogwood, flowering Cornus florida  Dogwood, Korean Cornus kousa  Dogwood, shrub Cornus spp.  Dogwood, silky Cornus amomum  Elm Ulmus japonica  Elm, winged Ulmus alata  Eucalyptus (Silver-dollar) tree Eucalyptus cinerea  Fir, balsam Abies balsamae  Fir, Douglas Pseudotsuga menziesii  Fir, Fraser Abies fraseri  Fir, white Abies concolor  Franklinia Franklinia spp.  Fringe tree Chlonenthus retusus	Crape myrtle	Lagerstroemia indica	
Cypress, Leyland  Cupressocyparis leylandii  Dogwood, flowering  Cornus florida  Dogwood, Korean  Cornus kousa  Dogwood, shrub  Cornus spp.  Dogwood, silky  Cornus amomum  Elm  Ulmus japonica  Elm, winged  Ulmus alata  Eucalyptus (Silver-dollar) tree  Eucalyptus cinerea  Fir, balsam  Abies balsamae  Fir, Douglas  Pseudotsuga menziesii  Fir, Fraser  Abies fraseri  Fir, white  Abies concolor  Franklinia  Franklinia spp.  Fringe tree  Chlonenthus retusus	Cryptomeria, Japanese cedar	Cryptomeria japonica	
Dogwood, flowering         Cornus florida           Dogwood, Korean         Cornus kousa           Dogwood, shrub         Cornus spp.           Dogwood, silky         Cornus amonum           Elm         Ulmus japonica           Elm, winged         Ulmus alata           Eucalyptus (Silver-dollar) tree         Eucalyptus cinerea           Fir, balsam         Abies balsamae           Fir, Douglas         Pseudotsuga menziesii           Fir, Fraser         Abies fraseri           Fir, white         Abies concolor           Franklinia         Franklinia spp.           Fringe tree         Chlonenthus retusus	Cypress, bald	Taxodium distichum	
Dogwood, Korean Cornus kousa  Dogwood, shrub Cornus spp.  Dogwood, silky Cornus amonum  Elm Ulmus japonica  Elm, winged Ulmus alata  Eucalyptus (Silver-dollar) tree Eucalyptus cinerea  Fir, balsam Abies balsamae  Fir, Douglas Pseudotsuga menziesii  Fir, Fraser Abies fraseri  Fir, white Abies concolor  Franklinia Franklinia spp.  Fringe tree Chlonenthus retusus	Cypress, Leyland	Cupressocyparis leylandii	
Dogwood, shrub  Cornus spp.  Dogwood, silky  Cornus amonum  Elm  Ulmus japonica  Elm, winged  Ulmus alata  Eucalyptus (Silver-dollar) tree  Eucalyptus cinerea  Fir, balsam  Abies balsamae  Fir, Douglas  Pseudotsuga menziesii  Fir, Fraser  Abies fraseri  Fir, white  Abies concolor  Franklinia  Franklinia spp.  Fringe tree  Chlonenthus retusus	Dogwood, flowering	Cornus florida	
Dogwood, silky  Cornus amomum  Elm  Ulmus japonica  Elm, winged  Ulmus alata  Eucalyptus (Silver-dollar) tree  Eucalyptus cinerea  Fir, balsam  Abies balsamae  Fir, Douglas  Pseudotsuga menziesii  Fir, Fraser  Abies fraseri  Fir, white  Abies concolor  Franklinia  Franklinia spp.  Fringe tree  Chlonenthus retusus	Dogwood, Korean	Cornus kousa	
Elm Ulmus japonica  Elm, winged Ulmus alata  Eucalyptus (Silver-dollar) tree Eucalyptus cinerea  Fir, balsam Abies balsamae  Fir, Douglas Pseudotsuga menziesii  Fir, Fraser Abies fraseri  Fir, white Abies concolor  Franklinia Franklinia spp.  Fringe tree Chlonenthus retusus	Dogwood, shrub	Cornus spp.	
Elm, winged Ulmus alata  Eucalyptus (Silver-dollar) tree Eucalyptus cinerea  Fir, balsam Abies balsamae  Fir, Douglas Pseudotsuga menziesii  Fir, Fraser Abies fraseri  Fir, white Abies concolor  Franklinia Franklinia spp.  Fringe tree Chlonenthus retusus	Dogwood, silky	Cornus amomum	
Eucalyptus (Silver-dollar) tree Eucalyptus cinerea  Fir, balsam Abies balsamae  Fir, Douglas Pseudotsuga menziesii  Fir, Fraser Abies fraseri  Fir, white Abies concolor  Franklinia Franklinia spp.  Fringe tree Chlonenthus retusus	Elm	Ulmus japonica	
Fir, balsam  Abies balsamae  Fir, Douglas  Pseudotsuga menziesii  Fir, Fraser  Abies fraseri  Fir, white  Abies concolor  Franklinia  Franklinia spp.  Fringe tree  Chlonenthus retusus	Elm, winged	Ulmus alata	
Fir, Douglas  Pseudotsuga menziesii  Fir, Fraser  Abies fraseri  Fir, white  Abies concolor  Franklinia  Franklinia spp.  Fringe tree  Chlonenthus retusus	Eucalyptus (Silver-dollar) tree	Eucalyptus cinerea	
Fir, Fraser Abies fraseri  Fir, white Abies concolor  Franklinia Franklinia spp.  Fringe tree Chlonenthus retusus	Fir, balsam	Abies balsamae	
Fir, white Abies concolor  Franklinia Franklinia spp.  Fringe tree Chlonenthus retusus	Fir, Douglas	Pseudotsuga menziesii	
Franklinia Franklinia spp. Fringe tree Chlonenthus retusus	Fir, Fraser	Abies fraseri	
Fringe tree Chlonenthus retusus	Fir, white	Abies concolor	
	Franklinia	Franklinia spp.	
Ginkgo Ginkgo biloba	Fringe tree	Chlonenthus retusus	
	Ginkgo	Ginkgo biloba	



Table 4. To	olerant Ornam	ental Species	(continued)
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Common Name	Scientific Name
Trees (continued)	
Gum, black	Nyssa sylvatica
Gum, sour	Nyssa sylvatica
Haw, black	Viburnum prunifolium
Hawthorn	Crataegus spp.
Hemlock, Canada	Tsuga canadensis
Hemlock, Eastern	Tsuga canadensis
Holly, American	llex opaca
Honeylocust	Gleditsia triacanthos
Lilac, common	Syringa vulgaris
Lilac, Japanese tree	Syringa reticulata
Linden	Tilia spp.
Magnolia, saucer	Magnolia soulangiana
Magnolia, Southern	Magnolia grandiflora
Magnolia, star	Magnolia stellata
Maidenhair tree	Ginkgo biloba
Maple, Japanese	Acer palmatum
Maple, Norway	Acer platanoides
Maple, red	Acer rubrum
Maple, sugar	Acer saccharum
Nannyberry, rusty	Viburnum rufidulum
Oak, chinquapin	Quercus muehlenbergii
Oak, live	Quercus virginiana
Oak, pin	Quercus palustris
Oak, red	Quercus rubra
Oak, swamp chestnut	Quercus michauxii
Oak, water	Quercus nigra
Oak, white	Quercus alba
Oak, willow	Quercus phellos
Olive	Olea europaea
Palm, date	Phoenix spp.
Palm, fan	Washingtonia spp.
Palm, pindo	Butia spp.
Palm, Washington	Washingtonia spp.
Peach	Prunus persica
Pear, Bradford	Pyrus calleryana 'Bradford'
Pecan	Carya illinoensis

# Table 4. Tolerant Ornamental Species (continued)

Common Name	Scientific Name
Trees (continued)	
Pine, Austrian	Pinus nigra
Pine, Italian stone	Pinus pinea
Pine, loblolly	Pinus taeda
Pine, Monterey	Pinus radiata
Pine, red	Pinus resinosa
Pine, Scotch	Pinus sylvestris
Pine, Virginia	Pinus virginiana
Pine, white	Pinus strobus
Plum, purple leaf	Prunus cerasifera
Poplar, black	Populus nigra
Redcedar, Eastern	Juniperus virginiana
Redcedar, Western	Thuja plicata
Red ironbark	Eucalyptus sideroxylon 'Rosea'
Redwood, dawn	Metasequoia glyptostroboides
Sequoia, giant	Sequoiadendron giganteum
Serviceberry	Amelanchier laevis
Sourwood	Oxydendrum arboreum
Spruce, Colorado blue	Picea pungens
Spruce, dwarf Alberta	Picea glauca 'Albertiana'
Spruce, Norway	Picea abies
Spruce, white	Picea glauca
Sweetgum	Liquidambar styraciflua
Sycamore	Platanus occidentalis
Trachycarpus	Trachycarpus spp.
Tulip tree	Liriodendron tulipifera
Walnut, black	Juglans nigra
Willow, weeping	Salix babylonica
Yellowwood	Cladrastis lutea



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81045392-2009-04-194-0050 (121418)



NOTES



For use as a preemergence weed control herbicide in turfgrass, landscape or grounds maintenance, noncropland areas, and ornamental production

<b>Active Ingredient:</b> pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine	38.7%
Other Ingredients:	61.3%
Total:	100.0%

1 gallon contains 3.8 lbs of microencapsulated pendimethalin in an aqueous carrier.

# KEEP OUT OF REACH OF CHILDREN CAUTION/ PRECAUCIÓN

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.)

#### **FIRST AID**

If in eyes

- Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes.
- Call a poison control center or doctor for treatment advice.

#### **HOTLINE**

Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency endangering life or property involving this product, call day or night, 1-800-424-9300.

See booklet for complete Precautionary Statements, Directions For Use, Condition of Sale and Limitation of Warranty and Liability, and state-specific crop and/or use site restrictions.

Manufactured for:

LESCO, Inc. • 1385 East 36th Street • Cleveland, OH 44114-4114

LESCO and Pre-M are registered trademarks and the sweeping design is a trademark of LESCO Technologies LLC. AquaCap is a trademark of BASF Corporation.

#59025333

Net Contents: 2.5 gal (9.46 L) (121418)

#### **Precautionary Statements**

#### **Hazards To Humans And Domestic Animals**

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

#### **Environmental Hazards**

This product is toxic to fish. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

#### **Directions For Use**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at time of herbicide application.

**DO NOT** apply this product through any type of irrigation system.

LESCO, Inc. does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

**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 requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

**DO NOT** apply **LESCO Pre-M AquaCap Herbicide** in greenhouses, shadehouses, or other enclosed structures.

Not for use for commercial seed production.

# AGRICULTURAL AND NONAGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to booklet under "Agricultural Use Requirements" in the Directions For Use section for information about this standard.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal. **Pesticide Storage** 

**DO NOT** store below 15° F. Extended storage at temperatures below 15° F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals dissolve.

#### Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. 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

Nonrefillable Container. DO NOT reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.









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# 1. Identification

#### Product identifier used on the label

# **LESCO Pre-m Aquacap Herbicide**

### Recommended use of the chemical and restriction on use

Recommended use\*: crop protection product, herbicide Unsuitable for use: Uses other than recommended

### Details of the supplier of the safety data sheet

Company: LESCO, Inc. 1385 East 36th Street Cleveland, PA 44114, USA

Telephone: +1 800 347-4272

# **Emergency telephone number**

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

# Other means of identification

Substance number: 171005

Molecular formula: C13 H19 N3 O4 Synonyms: pendimethalin

# 2. Hazards Identification

# According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

# Classification of the product

Repr. 2 (unborn child) Reproductive toxicity

Aquatic Acute 2 Hazardous to the aquatic environment - acute Aquatic Chronic 2 Hazardous to the aquatic environment - chronic

<sup>\*</sup> The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

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Skin Sens. 1 Skin sensitization

#### Label elements

Pictogram:





# Signal Word: Warning

Hazard Statement:

H317 May cause an allergic skin reaction.H361 Suspected of damaging the unborn child.

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280 Wear protective gloves, protective clothing and eye protection or face

protection.

P261 Avoid breathing mist or vapour or spray.
P273 Avoid release to the environment.
P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and

understood.

P272 Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P308 + P313 IF exposed or concerned: Get medical attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

Precautionary Statements (Storage): P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local regulations.

#### Hazards not otherwise classified

Labeling of special preparations (GHS):

CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

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# 3. Composition / Information on Ingredients

# According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

pendimethalin

CAS Number: 40487-42-1 Content (W/W): 38.7 %

Synonym: N-(1-Ethylpropyl)-2,6-dinitro-3,4-xylidine; Pendimethalin

### 4. First-Aid Measures

# **Description of first aid measures**

#### General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product.

#### If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

# If on skin:

Wash thoroughly with soap and water

#### If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

# If swallowed:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

#### Most important symptoms and effects, both acute and delayed

Symptoms: orange-red coloured urine caused by dye (not associated with methemoglobinemia) Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

# Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no

known specific antidote.

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# 5. Fire-Fighting Measures

# Extinguishing media

Suitable extinguishing media: foam, dry powder, carbon dioxide, water spray

# Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide,

If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

# Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

#### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

### 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

# **Environmental precautions**

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

#### Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

# 7. Handling and Storage

#### Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The

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substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

#### Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

# Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed. Protect from temperatures below: -5 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

# 8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

No substance specific occupational exposure limits known.

# Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

# Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

#### Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

### Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

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### Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

### **Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

### General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

# 9. Physical and Chemical Properties

Form: liquid

Melting point:

Odour: faint odour, nutty

Odour threshold: Not determined due to potential health hazard by inhalation.

Colour: yellow to brown approx. 7 - 9 (21 °C)

(measured with the undiluted

substance) approx. 0 °C

Information applies to the solvent.

Flash point: > 230 °F not applicable

Lower explosion limit: As a result of our experience with this

product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Upper explosion limit: As a result of our experience with this

product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Autoignition: 354 °C (DIN EN 14522)

SADT: > 75 °C

Density: approx. 9.79 lb/USg

(68 °F)

Vapour density: not applicable Partitioning coefficient n- not applicable

octanol/water (log Pow):

Thermal decomposition: 235 °C, 900 kJ/kg (DSC (OECD 113))

(onset temperature)

Not a substance liable to self-decomposition according to UN

transport regulations, class 4.1.

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Viscosity, dynamic: 128 mPa.s (OECD 114)

(20 °C)

Solubility in water: dispersible
Molar mass: 281.31 g/mol
Evaporation rate: not applicable

Other Information: If necessary, information on other physical and chemical

parameters is indicated in this section.

# 10. Stability and Reactivity

# Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties: not fire-propagating

# Chemical stability

The product is stable if stored and handled as prescribed/indicated.

# Possibility of hazardous reactions

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

#### Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

#### Incompatible materials

strong acids, strong bases, strong oxidizing agents

# Hazardous decomposition products

Decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

Thermal decomposition:

235 °C, 2.5 K/min (DSC (OECD 113))

(onset temperature)

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

# 11. Toxicological information

#### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

# **Acute Toxicity/Effects**

**Acute toxicity** 

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Assessment of acute toxicity: Relatively nontoxic after single ingestion. Relatively nontoxic after short-term inhalation. Relatively nontoxic after short-term skin contact.

Oral

Type of value: LD50 Species: rat (female)

Value: > 2,000 mg/kg (OECD Guideline 423)

No mortality was observed.

**Inhalation** 

Type of value: LC50

Species: rat

Value: > 5.2 mg/l (OECD Guideline 403)

Exposure time: 4 h An aerosol was tested. No mortality was observed.

**Dermal** 

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg (OECD Guideline 402)

#### Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

# Irritation / corrosion

Assessment of irritating effects: Not irritating to the eyes. May cause slight irritation to the skin.

Skin

Species: rabbit

Result: Slightly irritating.

<u>Eye</u>

Species: rabbit Result: non-irritant

Method: OECD Guideline 405

#### Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse Result: sensitizing

Method: OECD Guideline 406

### **Aspiration Hazard**

The product has not been tested. The statement has been derived from the properties of the individual components. No aspiration hazard expected.

# **Chronic Toxicity/Effects**

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# Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

#### Information on: pendimethalin

Assessment of repeated dose toxicity: No substance-specific organtoxicity was observed after repeated administration to animals. Adaptive effects were observed after repeated exposure in animal studies.

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#### Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

### Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

# Information on: pendimethalin

Assessment of carcinogenicity: In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

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#### Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

#### Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

#### Information on: pendimethalin

Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

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# Experiences in humans

Pendimethalin is a strongly orange-red compound - virtually an aniline dye. Cases have been described of of orange-yellow colouration of urine following heavy exposure of workers to the dust of pendimethalin. Despite its structure as both a nitro-compound and aromatic amine, exposure to pendimethalin is NOT associated with methemoglobinemia.

#### Other Information

Misuse can be harmful to health.

### Medical conditions aggravated by overexposure

Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

# 12. Ecological Information

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# **Toxicity**

Aquatic toxicity

Assessment of aquatic toxicity:

Toxic to aquatic life with long lasting effects.

Very toxic (acute effect) to aquatic organisms.

#### Toxicity to fish

LC50 (96 h) 20.36 mg/l, Oncorhynchus mykiss (OECD Guideline 203, static)

# Aquatic invertebrates

EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

#### Aquatic plants

EC50 (72 h) 1.49 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)

EC10 (72 h) 0.14 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)

EC50 (7 d) 19.25 mg/l (growth rate), Lemna gibba (OECD guideline 221)

No observed effect concentration (7 d) 1.0 mg/l (growth rate), Lemna gibba (OECD guideline 221)

#### Assessment of terrestrial toxicity

Acutely harmful to terrestrial organisms.

### Persistence and degradability

Assessment biodegradation and elimination (H2O)

Information on: pendimethalin

Not readily biodegradable (by OECD criteria).

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# Mobility in soil

### Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin

The substance will slowly evaporate into the atmosphere from the water surface.

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

# Additional information

Other ecotoxicological advice:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

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# 13. Disposal considerations

#### Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA: D028

The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assignments.

# 14. Transport Information

### Land transport

**USDOT** 

Not classified as a dangerous good under transport regulations

Sea transport

**IMDG** 

Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHSM

Marine pollutant: YES

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (contains PENDIMETHALIN)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHSM

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (contains PENDIMETHALIN)

# **Further information**

DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this SDS for the RQ for this product.

# 15. Regulatory Information

#### **Federal Regulations**

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# Registration status:

Crop Protection TSCA, US released / exempt

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

#### State regulations

State RTKCAS NumberChemical namePA107-06-21,2-dichloroethaneNJ40487-42-1pendimethalin

# Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

#### BASF Risk Assessment, CA Prop. 65:

Based on an evaluation of the product's composition and the use(s), this product does not require a California Proposition 65 Warning.

#### NFPA Hazard codes:

Health: 2 Fire: 1 Reactivity: 1 Special:

### Labeling requirements under FIFRA

This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

### CAUTION:

KEEP OUT OF REACH OF CHILDREN.

Hazards to humans and domestic animals.

Causes moderate eye irritation.

HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

Avoid contact with the skin, eyes and clothing.

# 16. Other Information

#### SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2023/04/15

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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