



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505T)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

93182-31

Date of Issuance:

10/25/22

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

Gharda Triclopyr 48EC Herbicide

Name and Address of Registrant (include ZIP Code):

Gharda Chemicals International, Inc.  
c/o IPM Resources, LLC  
4032 Crockers Lake Blvd, Suite 818  
Sarasota, FL 34238

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

*Continues page 2*

Signature of Approving Official:

Mindy Ondish, Product Manager 23  
Herbicide Branch, Registration Division (7505T)

Date:

10/25/22

2. You are required to comply with the data requirements described in the generic data call-in (GDCI) identified below:
  - a. Triclopyr GDCI-116001-1546

You must comply with all of the data requirements within the established deadlines. If you have questions about the GDCI listed above, you may contact the Chemical Review Manager in the Pesticide Re-Evaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. This product is not registered for residential use. Child-resistant packaging (CRP) is required for this product if the registration is amended to allow *residential use* as defined under 40 CFR §157.21. CRP data must be conducted on this product's packaging and submitted for Agency review to support residential use.
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance. If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF:

- Basic CSF dated 10/15/2021

If you have any questions, please contact Derek Corbin at 202-566-2571 or at [Corbin.Derek@epa.gov](mailto:Corbin.Derek@epa.gov).

Enclosure

TRICLOPYR GROUP 4 HERBICIDE

# Gharda Triclopyr 48EC

## Herbicide

For the control of woody plants and vines, and annual and perennial broadleaf weeds on:

- o Conservation Reserve Program (CRP) acres, rangeland and permanent grass pastures
- o Forest sites,
- o noncropland areas including conifer plantations, non-cropland areas, including airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military lands, mining and drilling areas, non-irrigation ditch banks, oil and gas pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turf grasses, ornamental turf, golf courses, sod farms, vacant lots,
- o natural areas (open space) including campgrounds, parks, prairie management, trails and trail heads, recreation areas, wildlife openings,
- o wildlife habitat and management areas, and
- o including grazed areas on all listed sites.

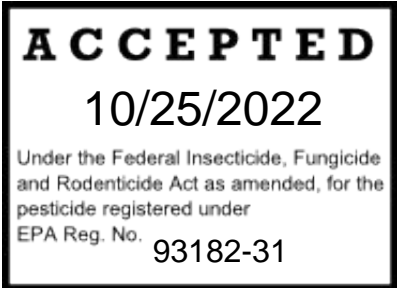
**Active Ingredient:**

Triclopyr, butoxyethyl ester\*: Acetic acid,2-[(3,5,6-trichloro-2-pyridinyl)oxy]-, 2-butoxyethyl ester.....60.2%

Other Ingredients.....39.8%

Total .....100.00%

\*Contains 4 pounds/gal of triclopyr acid equivalent per gallon (43.3% ae)  
Contains petroleum distillates



EPA Reg. No. 93182- 31

Est. No. \_\_\_\_\_

### Keep Out of Reach of Children

## WARNING/AVISO

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.)

#### Agricultural Use Requirements

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

*Refer to inside of label booklet for additional precautionary information including directions for use.*

**Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product,  
call **1-(866)-359-5660**

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

**Manufactured for:**  
**Gharda Chemicals International, Inc.**  
**760 Newtown-Yardley Road**  
**Suite 110**  
**Newtown, PA 18940 USA**  
**1 (215) 968-9474**

**Net Contents (    ) Gallons (    ) Liters**

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## Precautionary Statements

### Hazards to Humans and Domestic Animals

#### WARNING.

May be fatal if swallowed. Harmful if absorbed through the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Chemical-resistant gloves made of barrier laminate, nitrile rubber  $\geq 14$  mils, butyl rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils.
- In addition, for mixers and loaders supporting aerial applications via helicopter to forestry sites must wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; or a NIOSH-approved elastomeric particulate respirator with an R or P filter; or a NIOSH-approved powered air purifying respirator with HE filters.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, 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 170.607 (d-f)), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### User Safety Recommendations

Users should:

- Remove clothing/PPE 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.
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

#### First Aid

**If swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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

**For additional information on this product (including health concerns, medical emergencies, or pesticide incidents), you may call 1-(866)-359-5660, twenty-four (24) hours per day, seven (7) days per week.**

#### NOTE TO PHYSICIAN

Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

## Environmental Hazards

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. 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 wash waters or rinsate.

**Non-target Organism Advisory:** This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

**Groundwater Advisory:** Triclopyr has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

**Surface Water Advisory:** This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application.

A level well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of triclopyr from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

## Directions for Use

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

Read all Directions for Use carefully before applying. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE 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 barrier laminate, nitrile rubber  $\geq 14$  mils, butyl rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils.
- Shoes plus socks

## Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter or allow others to enter the treated area until sprays have dried.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**PESTICIDE STORAGE:** Store above 28°F and agitate before use.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

### CONTAINER HANDLING:

**5 gallons or less: Nonrefillable Container** Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**5 gallons or larger: Refillable Container** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Nonrefillable Container larger than 5 gallons:** Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**For Chemical Spill, Leak, Fire, Exposure, or Accident you may call CHEMTREC at 1-800-424-9300 twenty-four (24) hours per day, seven (7) days per week**



## Product Information

For the control of woody plants and vines, and annual and perennial broadleaf weeds on:

- Conservation Reserve Program (CRP) acres, rangeland and permanent grass pastures
- Forest sites,
- noncropland areas including conifer plantations, non-cropland areas, including airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military lands, mining and drilling areas, non-irrigation ditch banks, oil and gas pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turf grasses, ornamental turf, golf courses, sod farms, vacant lots,
- natural areas (open space) including campgrounds, parks, prairie management, trails and trail heads, recreation areas, wildlife openings,
- wildlife habitat and management areas, and
- including grazed areas on all listed sites.

## Use Precautions and Restrictions and for all Use Sites

When applying this product in tank mix combination, follow all applicable use directions and precautions on each manufacturer's label. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Use Precautions:

- Local conditions may affect the use of herbicides. Consult your local specialist for advice in selecting treatments from this label to best fit local conditions.
- Avoid direct application to Christmas trees as conifer injury may result. When treating unwanted vegetation in Christmas tree plantations, use sprays directed away from conifers.
- Gharda Triclopyr 48EC Herbicide is formulated as a low volatile ester. However, the combination of spray contact with impervious surfaces, such as roads and rocks, and increasing ambient air temperatures, may result in an increase in the volatility potential for this herbicide, increasing a risk for off-target injury to nearby sensitive Agricultural crops, for example grapes and tomatoes.
- Many forbs (herbaceous broadleaves) are susceptible to Gharda Triclopyr 48EC Herbicide. Unless injury or loss of such plants can be tolerated, do not spray grazed sites containing desirable broadleaf forbs (especially legumes such as clover). After applications the stand and growth of established grasses is usually improved, especially when rainfall is adequate and grazing is deferred.

### Use Restrictions

- Agricultural Use Requirements for Forestry Uses: For use of this product on forestry sites, follow PPE and Reentry restrictions in the *Agricultural Use Requirements* box under the *Directions for Use Section* of this label
- Use Requirements for Non-Cropland Areas: No worker protection Standard worker entry restrictions or worker notification requirements apply when this product is applied to non-cropland.
- Not for Residential Use.
- Do not apply Gharda Triclopyr 48EC Herbicide to exposed roots of shallow rooted trees and shrubs.
- Do not apply more than 2 lb. ae (2 qts. of Gharda Triclopyr 48EC Herbicide) per acre in a single application when spot treating.
- Portions of grazed areas that intersect treated non-cropland, rights-of-way and forestry sites may be treated at up to 8 lbs. ae per acre (8 qts./A/yr Gharda Triclopyr 48EC Herbicide) if the area to be treated on the day of application comprises no more than 10% of the total grazable area.

- On use sites that may be grazed, including rights-of-way, pasture, fence rows, and rangeland, Do not apply more than 2 lb. ae per acre per year of triclopyr (2 qts./A/yr of Gharda Triclopyr 48EC Herbicide).
- Grazing lactating Dairy Animals: Do not allow lactating dairy animals to graze treated areas until the next growing season following application of this product. This product is persistent and may be present in treated plant materials for over 30 days after application. Do not sell or transport treated plant materials or manure from animals that have grazed on treated plant materials off-site for compost distribution or for use as animal bedding/feed for 30 days after application.
- On forestry use sites, do not apply more than 6 lbs. ae per acre per year of triclopyr (6 qts./A/yr of Gharda Triclopyr 48EC Herbicide).
- **Arizona:** The state of Arizona has not approved Gharda Triclopyr 48EC Herbicide for use on plants grown for commercial production; specifically on designated grazing areas or use on sod farms.
- Do not apply this product through any type of chemigation or irrigation systems.
- Do not apply to ditches used to transport irrigation water. Do not apply where runoff or irrigation water may flow onto agricultural land as injury to crops may result.
- It is permissible to treat non-irrigation ditch banks, seasonably dry wetlands, flood plains, deltas, marshes, swamps, bogs and transitional areas between upland and lowland sites. Do not apply to open water such as lakes, reservoirs, rivers, streams, creeks, saltwater bays, or estuaries.
- Do not apply this product through mist blowers unless a drift control additive, high viscosity inverting system, or equivalent is used to control spray drift.
- Do not make direct applications or allow spray mists to drift onto cotton, fruit or orchard trees, shrubs, grapes, peanuts, soybeans, tobacco, vegetable crops, flowers, citrus, or other desirable broadleaf plants.

Read the **Use Information Section** under **Directions for Use** in this label for any **Additional Use-Specific Precautions and Restrictions**.

### Maximum Use Rates

For all use sites other than range, pasture, forestry sites, and grazed /hayed areas, apply no more than 8 lb. ae triclopyr (8 quarts of Gharda Triclopyr 48EC Herbicide) per acre per year. See **Table 1** below for relationship between mixing rate, spray volume, and maximum application rate for pasture, rangeland, ornamental turf, Forestry sites (which intersect with grazed areas) and non-crop applications.

**Table 1.** Maximum Application Rates and Minimum Retreatment Intervals for Non-crop Areas, Forestry, Ornamental Turf and Rangeland/Pasture.

Site	Maximum single Application rate (lb. ae/A)	Maximum yearly Application rate (lb. ae/A)	Minimum retreatment interval (days)
Pasture and rangeland	2	2	28
Spot treatment on non-cropland, rights-of-way, and forestry sites that intersect grazed areas (e.g., public easements)	8	8	28
Forestry	6	6	28
Non-crop areas (including rights-of-	8	8	28

way, fencerows, and similar areas).			
Ornamental Turf	1	4	28

**Use Rate Restrictions for Pasture and Rangeland**

- For use on pastures and rangeland, do not apply more than 2 qt. of product (2 lb ae triclopyr) per acre per application.
- Do not apply more than 2 qt. of product (2 lb ae triclopyr) per acre per year.
- There are no grazing restrictions for livestock or dairy animals on treated areas. This product is persistent and may be present in treated plant materials for over 30 days after application. Do not sell or transport treated plant materials or manure from animals that have grazed on treated plant materials off-site for compost distribution or for use as animal bedding/feed for 30 days after application.
- Animals that have been fed triclopyr treated forage must be fed forage free of triclopyr for at least 3 days before movement to an area where manure may be collected, or sensitive crops are grown.
- See **Table 2** below for relationship between mixing rate, spray volume, and maximum application rate.

**Use Rate Restrictions for Forestry, Non-crop areas (including rights-of-way, fencerows, and similar areas)**

- For use on Forestry and Non-crop areas, do not apply more than 2 qt. of product (2 lb ae triclopyr) per acre per application.
- On forestry sites, apply no more than 6 lb. ae of triclopyr (6 quarts of Gharda Triclopyr 48EC Herbicide) per acre per year.
- **Spot Treatment:** The maximum application rate for spot treatments on non-cropland, rights-of-way, and forestry sites that intersect grazed areas is 8 lb ae/A/year.
- The minimum re-treatment interval is 28 days.

**Use Rate Restrictions for Haying (harvesting or composting dried forage)**

- Do not harvest hay for 14 days after application.
- Do not remove grass clippings off-site for compost distribution or mulching until 30 days after application.
- During the season of application, withdraw livestock from grazing treated grass at least 3 days before slaughter.

**Aquatic Applications**

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs) and transitional areas between upland and lowland sites where surface water is not present except in isolated pockets due to uneven or unlevel conditions. *Follow the use rates given in this label for Aquatic Applications.*

**Use Restrictions:**

- Do not apply to open waters, such as, lakes, reservoirs, rivers, streams, creeks, saltwater bays, or estuaries).
- Do not apply on ditches that are used to transport irrigation water.
- Do not apply where runoff or irrigation water may flow onto agricultural land as injury to crops may result.

**READ THIS LABEL THOROUGHLY FOR ADDITIONAL USE RESTRICTIONS AND PRECAUTIONS FOR SPECIFIC USE SITES**

## SPRAY DRIFT MANAGEMENT

### **Mandatory Spray Drift Management**

#### **Aerial Applications:**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy unless a greater application height is necessary for pilot safety.
- Applicators are required to select the nozzle and pressure that deliver a medium or coarser droplet size (ASABE S641).
- If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply when windspeeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions

#### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to select the nozzle and pressure that deliver a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

#### **Boom-less Ground Sprayer Applications:**

- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

## **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

- Adjust Nozzles – Follow nozzle manufacturer's recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles must be oriented parallel with the airflow in flight.

#### **BOOM HEIGHT– Ground Boom**

- For ground equipment, the boom must remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT – Aircraft**

- Higher release heights increase the potential for spray drift.

## **SHIELDED SPRAYERS**

- Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## **TEMPERATURE AND HUMIDITY**

- When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## **TEMPERATURE INVERSIONS**

- Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions,

## **WIND**

- Drift potential increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**
- Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## **Boomless ground applications:**

- Setting nozzles at the lowest effective height will help to reduce the potential spray drift.

## **Handheld Technology Applications:**

- Take precautions to minimize spray drift.

## **Mixing Directions for All Use Sites**

Gharda Triclopyr 48EC Herbicide may be foliar applied by diluting with water or by preparing an oil-water emulsion. For woody plant control, an oil-water emulsion performs more dependably under a broader range of conditions than a straight water dilution and is recommended for aerial applications.

**When Gharda Triclopyr 48EC Herbicide is mixed with water it forms a water emulsion (not a solution) and separation may occur unless the spray mixture is agitated continuously.**

**Mixing with oil requires vigorous agitation to form an oil emulsion. Once an oil emulsion is formed it will stay stable.**

**Oil-Water Mixture Sprays:** Prepare a premix of oil, surfactant and Gharda Triclopyr 48EC Herbicide in a separate container using diesel fuel, fuel oil, or kerosene plus an emulsifier such as Sponto 712 or Triton X-100. Use a jar test to check spray mix compatibility before preparing oil-water emulsion sprays in the mixing tank. Do not allow any water or mixtures containing water to get into the premix of Gharda Triclopyr 48EC Herbicide since a thick "invert" (water in oil) emulsion may form that will be difficult to break. Such an emulsion may also be formed if the premix of Gharda Triclopyr 48EC Herbicide is put into the mixing tank before the addition of water. Fill the spray tank about one-half full with water, then slowly add the premix with continuous agitation and complete filling the tank with water. Continue moderate agitation.

**Oil Mixture Sprays for Basal Treatment:** Prepare oil-based spray mixtures using either a commercially available basal oil, kerosene diesel fuel, or No. 1 or No. 2 fuel oil. Substitute other oils or diluents only as recommended by the oil or diluent's manufacturer. When mixing an oil mixture, read and follow the use directions and precautions on the manufacturer's product label. Add Gharda Triclopyr 48EC Herbicide to the required amount of oil in the spray tank or mixing tank and mix thoroughly. If the mixture stands over four hours, reagitating is required.

**Oil Mixtures of Gharda Triclopyr 48EC Herbicide and Tordon 22K:** Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] and Gharda Triclopyr 48EC Herbicide may be used in tank mix combination for basal bark treatment of woody plants. These herbicides are incompatible and will not form a stable mixture when mixed directly in

oil. Make a stable tank mixture for basal bark application by first combining each product with a compatibility agent prior to final mixing in the desired ratio. Tordon 22K is not registered for use in the states of **California** and **Florida**.

## Herbicide Resistance Management

TRICLOPYR	GROUP	4	HERBICIDE
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Triclopyr, the active ingredient in this product, is a Group 4 herbicide based on the mode of action classification system of the Weed Science Society of America.

### Weed Resistant Management

Any weed population may contain or develop plants resistant to Group 4 herbicides. Resistant weeds may dominate the weed population if these herbicides are used repeatedly in the same field. Such resistant weed plants may not be effectively managed using Group 4 herbicides but may be effectively managed utilizing other herbicides alone or in mixtures from a different herbicide Groups that are labeled for control of these weeds and/or by using cultural or mechanical practices. However, a herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides.

Rotate the use of Gharda Triclopyr 48EC Herbicide or other Group 4 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.

Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use less than resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is less prone to resistance.

Adopt an integrated weed management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation that considers tillage (or other mechanical control methods), cultural, biological, and other management practices. Scout after a herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by mechanical method such as hoeing, mowing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.

If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.

Contact your local extension specialist or certified crop advisor for additional pesticide resistance management or integrated weed management recommendations for specific use sites.

## Plants Controlled by Gharda Triclopyr 48EC Herbicide

### Woody Plants Controlled

Common Name	Scientific Name	Life Cycle	Plant Family
acacia, twisted	<i>Acacia tortuosa</i>	perennial	Fabaceae
alder	<i>Aldus spp.</i>	perennial	Betulaceae
arrowwood	<i>Viburnum ventanum</i>	perennial	Caprifoliaceae

ash	<i>Fraxinus spp.</i>	perennial	Oleaceae
aspen	<i>Populus tremuloides</i>	perennial	Salicaceae
bear clover (bearmat)	<i>Chamaebatia foliolosa</i>	perennial	Fabaceae
beech	<i>Fagus spp.</i>	perennial	Fagaceae
birch	<i>Betula spp.</i>	perennial	Betulaceae
blackberry	<i>Rubus spp.</i>	perennial	Rosaceae
blackbrush	<i>Acacia rigidula</i>	perennial	Fabaceae
blackgum	<i>Nyssa salvatica</i>	perennial	Cornaceae
boxelder (1)	<i>Acer negundo</i>	perennial	Aceraceae
Brazilian pepper	<i>Schinus terebinthifolius</i>	perennial	Anacardiaceae
buckthorn	<i>Rhamnus spp.</i>	perennial	Rhamnaceae
cascara	<i>Rhamnus pushiana</i>	perennial	Rhamnaceae
ceanothus	<i>Ceanothus spp.</i>	perennial	Rhamnaceae
cherry	<i>Prunus spp.</i>	perennial	Rosaceae
cherry, choke	<i>Prunus virginiana</i>	perennial	Rosaceae
chinquapin	<i>Quercus muhlenbergii</i>	perennial	Fagaceae
cottonwood	<i>Populus deltoides</i>	perennial	Salicaceae
crataegus (hawthorn)	<i>Crataegus spp.</i>	perennial	Rosaceae
creeper, virginia (1)	<i>Parthenocissus quinquefolia</i>	perennial	Vitaceae
dogwood	<i>Cornus spp.</i>	perennial	Cornaceae
douglas-fir	<i>Pseudotsuga menziesii</i>	perennial	Pinaceae
elderberry	<i>Sambucus Canadensis</i>	perennial	Caprifoliaceae
elm	<i>Ulmus, spp</i>	perennial	Ulmaceae
elm, winged	<i>Ulmus alata</i>	perennial	Ulmaceae
gallberry	<i>Ilex coriacea</i>	perennial	Aquifoliaceae
granjeno	<i>Celtis ehrenbergiana</i>	perennial	Ulmaceae
guajillo	<i>Acacia berlandieri</i>	perennial	Fabaceae
Guava <sup>3</sup>	<i>Psidium guajava</i>	perennial	Myrtaceae
gorse	<i>Ulex europaeus</i>	perennial	Fabaceae
hazel	<i>Corylus americana</i>	perennial	Betulaceae
hickory	<i>Carya spp.</i>	perennial	Juglandaceae
hornbeam	<i>Carpinus spp.</i>	perennial	Betulaceae
huisache (suppression)	<i>Acacia farnesiana</i>	perennial	Fabaceae
ivy, poison	<i>Toxicodendron radicans</i>	perennial	Anacardiaceae
Kudzu <sup>2</sup>	<i>Pueraria lobate</i>	perennial	Fabaceae
locust	<i>Robinia spp.</i>	perennial	Fabaceae
madrone	<i>Arbutus spp.</i>	perennial	Ericaceae
magnolia, sweetbay	<i>Magnolia virginiana</i>	perennial	Magnoliaceae
maples	<i>Acer spp.</i>	perennial	Aceraceae
maple, bigleaf <sup>1</sup>	<i>Acer macrophyllum</i>	perennial	Aceraceae
milkweed vine <sup>3</sup>	<i>Asclepias spp.</i>	perennial	Asclepiaceae
mulberry	<i>Morus spp.</i>	perennial	Moraceae
myrtle. wax	<i>Morella cerifera</i>	perennial	Myricaceae
oaks	<i>Quercus spp.</i>	perennial	Fagaceae
oak, poison	<i>Toxicodendron diversilobum</i>	perennial	Anacardiaceae
osage orange	<i>Maclura pomifera</i>	perennial	Moraceae
Peppervine <sup>3</sup>	<i>Ampelopsis arborea</i>	perennial	Vitaceae
persimmon	<i>Disospyros spp.</i>	perennial	Ebenaceae
pine	<i>Pin us spp.</i>	perennial	Pinaceae
poplar	<i>Populus spp.</i>	perennial	Salicaceae
poplar, tulip	<i>Liriodendron tulipifera</i>	perennial	Magnoliaceae
primrose, willow	<i>Ludwigia peruviana</i>	perennial	Onagraceae

rose, wild	<i>Rosa spp.</i>	perennial	Rosaceae
salmonberry	<i>Rubus spectabilis</i>	perennial	Rosaceae
saltbush (silver myrtle) <sup>3</sup>	<i>Baccharis spp</i>	perennial	Asteraceae
Saltcedar <sup>1</sup>	<i>Tamarix spp.</i>	perennial	Tamariaceae
sassafras	<i>Sassafras spp.</i>	perennial	Lauraceae
scotchbroom	<i>Cytisus scoparius</i>	perennial	Fabaceae
sumac	<i>Rhus spp.</i>	perennial	Anacardiaceae
sweetgum	<i>Liquidamber styraciflura</i>	perennial	Hamamelidaceae
sycamore	<i>Platanus occidentalis</i>	perennial	Plantanaceae
tanoak	<i>Notholithocarpus densiflorus</i>	perennial	Fagaceae
tree of heaven	<i>Ailanthus altissima</i>	perennial	Simaroubaceae
trumpet creeper <sup>3</sup>	<i>Campsis radicans</i>	perennial	Bignoniaceae
Virginia creeper <sup>3</sup>	<i>Parthenocissus quinquefolia</i>	perennial	Vitaceae
willow	<i>Salix spp.</i>	perennial	Saliciaceae

<sup>1</sup>For best control, use either a basal bark or cut stump treatment.

<sup>2</sup>For complete control, re-treatment may be necessary.

<sup>3</sup>For Dormant Stem Treatment only

#### Annual and Perennial Broadleaf Weeds

Common Name	Scientific Name	Life Cycle	Plant Family
beggarweed, creeping	<i>Desmodium incanum</i>	perennial	Fabaceae
bindweed, field (top growth)	<i>Convolvulus arvensis</i>	perennial	Convolvulaceae
burdock, common	<i>Arctium minus</i>	biennial	Asteraceae
carrot, wild	<i>Daucus carota</i>	biennial	Apiaceae
chicory	<i>Cichorium intybus</i>	perennial	Asteraceae
cinquefoil, sulfur (2)	<i>Potentilla recta</i>	perennial	Rosaceae
clover	<i>Trifolium spp.</i>	perennial	Fabaceae
dandelion (top growth)	<i>Taraxacum officinale</i>	perennial	Asteraceae
dock, curly	<i>Rumex crispus</i>	perennial	Polygonaceae
dogfennel	<i>Eupatorium capillifolium</i>	perennial	Asteraceae
goldenrod	<i>Solidago spp.</i>	perennial	Asteraceae
ivy, ground	<i>Glechoma hederacea</i>	perennial	Lamiaceae
kudzu	<i>Pueraria montana</i>	perennial	Fabaceae
lambquarters	<i>Chenopodium spp.</i>	annual	Chenopodiaceae
lespedeza, annual	<i>Lespedeza striata</i>	annual	Fabaceae
lespedeza, Sericea (1)	<i>Lespedeza cuneata</i>	perennial	Fabaceae
lettuce, prickly	<i>Lactuca serriola</i>	annual	Asteraceae
loosestrife, purple	<i>Lythrum salicaria</i>	perennial	Lythraceae
matchweed	<i>Lippia nodiflora</i>	perennial	Verbanaceae
medic, black	<i>Medicago lupulina</i>	perennial	Fabaceae
mustard	<i>Brassica spp.</i>	annual	Brassicaceae
mustard, garlic (4)	<i>Alisaria petiolata</i>	biennial	Brassicaceae
plantain	<i>Plantago spp.</i>	annual	Plantaginaceae
ragweed, common	<i>Ambrosia artemisiifolia</i>	annual	Asteraceae
ragweed, western	<i>Ambrosia psilostachya</i>	perennial	Asteraceae
smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	annual	Polygonaceae
soda apple, tropical (3)	<i>Solanum viarum</i>	perennial	Solanaceae
thistle, bull	<i>Cirsium vulgare</i>	biennial	Asteraceae



thistle, Canada	<i>Cirsium arvense</i>	perennial	Asteraceae
vetch	<i>Vicia spp.</i>	perennial	Fabaceae
violet, wild	<i>Viola papilionacea</i>	perennial	Violaceae
yarrow, common	<i>Achillea millefolium</i>	perennial	Asteraceae

- (1) **Sericea lespedeza:** Apply 1 to 2 pints of Gharda Triclopyr 48EC Herbicide per acre. For best results, apply after maximum foliage development in the late spring to early summer, but prior to bloom.
- (2) **Sulfur cinquefoil:** Apply 1 to 2 pints of Gharda Triclopyr 48EC Herbicide per acre. For best results, apply to plants in the rosette stage.
- (3) **Tropical soda apple:** Apply 2 pints of Gharda Triclopyr 48EC Herbicide per acre when tropical soda apple plants reach the first flower stage. For best results, apply in a total spray volume of 40 gallons per acre using ground equipment. An agricultural surfactant may be added at the manufacturer's recommended rate to provide more complete wetting and coverage of the foliage. Spot treatments may be used to control sparse plant stands. For spot treatment use a 1 to 1.5% solution of Gharda Triclopyr 48EC Herbicide in water (1 to 1 1/2 gallons of Gharda Triclopyr 48EC Herbicide in 100 gallons total spray mixture) and spray the entire plant to completely wet the foliage. In **Florida**, control of tropical soda apple may be improved by using the following management practices:
  - Mow plants to a height of 3 inches every 50 to 60 days or whenever they reach flowering. Continue the mowing operation through April.
  - In late May to June (50 to 60 days after the April mowing), apply Gharda Triclopyr 48EC Herbicide as a broadcast treatment.
  - Use spot treatment to control any remaining plants or thin stands of plants that germinate following a broadcast treatment
- (4) **Garlic mustard:** apply as a 1.25 to 2.5% v/v foliar spray-to-wet application

## Use Information

Use Gharda Triclopyr 48EC Herbicide at rates of 1 to 8 quarts per acre to control broadleaf weeds and woody plants. Use the higher rates in this rate range to control woody plants. In all cases, use the amount specified in enough water to give uniform and complete coverage of the plants to be controlled. The order of addition to the spray tank is water, spray thickening agent (if used), surfactant (if used), additional herbicide (if used), and Gharda Triclopyr 48EC Herbicide. If a standard agricultural surfactant is used, use at a rate of 1 to 2 quarts per acre. Use continuous adequate agitation.

Before using any recommended tank mixtures, read the directions and all precautions on both labels.

For best results apply when woody plants and weeds are actively growing. When hard to control species such as ash, blackgum, choke cherry, elm, maples (other than vine or big leaf), oaks, pines, or winged elm are prevalent, during applications made during late summer when the plants are mature, or during drought conditions, use the higher rates of Gharda Triclopyr 48EC Herbicide alone or in combination with Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2-pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] or Tordon 22K Herbicide [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt]. Graslan L and Tordon 22K are Restricted Use Pesticides. Graslan L and Tordon 22K are not registered for use in the states of **California** and **Florida**.

When using Gharda Triclopyr 48EC Herbicide in combination with Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low volatile ester herbicide, the higher application rate of Gharda Triclopyr 48EC Herbicide must be used for satisfactory brush control.

Use the higher dosage rates when brush approaches an average of 15 feet in height or when the brush covers more than 60% of the area to be treated. If lower rates are used on hard to control species, resprouting may occur the year following treatment.

On sites where easy to control brush species dominate, rates less than those listed may be effective. Consult state or local extension personnel for such information.

**Aerial Application (Helicopter Only unless for CRP, rangeland and pasture applications where fixed wing can be used)**

For aerial application on rights-of-way or other areas near susceptible crops, apply through a Microfoil or Thru-Valve<sup>1</sup> boom, or other drift control application equipment and/or use an agriculturally labeled drift control additive. If a spray thickening agent is used, follow all use recommendations and precautions on the product label. Spray only when the wind velocity is low (follow state regulations). Avoid application during air inversions.

<sup>1</sup> Reference within this label to a particular piece of equipment produced by or available from other parties is provided without consideration for use by the reader at its discretion and subject to the reader's independent circumstances, evaluation, and expertise. Such reference by Gharda is not intended as an endorsement of such equipment, shall not constitute a warranty (express or implied) of such equipment, and is not intended to imply that other equipment is not available and equally suitable. Any discussion of methods of use of such equipment does not imply that the reader must use the equipment other than is advised in directions available from the equipment's manufacturer. The reader is responsible for exercising its own judgment and expertise, or consulting with sources other than Gharda, in selecting and determining how to use its equipment.

**Foliage Treatment with Ground Application Equipment**

**High Volume Foliage Treatment:** For control of woody plants, use Gharda Triclopyr 48EC Herbicide at the rate of 2 to 6 quarts per 100 gallons of spray mixture, or Gharda Triclopyr 48EC Herbicide at 2 to 4 quarts may be tank mixed with labeled rates of Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low volatile ester herbicide Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2- pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] or Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] and diluted to make 100 gallons of spray. Do not apply more than 8 quarts of Gharda Triclopyr 48EC Herbicide per acre. Apply at a volume of 100 to 400 gallons of total spray per acre depending upon size and density of woody plants. Graslan L and Tordon 22K are not registered for use in the states of **California** and **Florida**. When tank mixing, follow applicable use directions and precautions on each manufacturer's label. Depending upon the size and density of the woody plants, apply sufficient spray volume to thoroughly wet all leaves, stems, and root collars. To minimize spray drift, select the minimum spray pressure that provides adequate plant coverage without forming a mist and direct sprays no higher than the top of the target plants. Use a drift control additive cleared for application to growing crops to reduce spray drift. Before using any tank mixture, read the directions and use precautions on both labels. For best results, apply when woody plants and weeds are actively growing. **Table 2** is provided as a guide to the user to achieve the proper rate of Gharda Triclopyr 48EC Herbicide on forestry and non-cropland sites.

**Table 2.** Application Rate per Spray Volume of Gharda Triclopyr 48EC Herbicide Used for Forestry and Non-cropland sites.

Total Spray Volume (gallons/acre)	Rate of Gharda Triclopyr 48EC Herbicide	
	Forestry Sites (qt/100 gallons of spray) <sup>1</sup>	Non-Cropland Sites (qt/100 gallons of spray) <sup>2</sup>
400	1.5	2
300	2	2.7
200	3	4
100	6	8
50	12	16
40	15	20
30	20	26.7
20	30	40
10	60	80

<sup>1</sup>Do not exceed the maximum use rate of 6 quarts of Gharda Triclopyr 48EC Herbicide (6 lb. ae of triclopyr) per acre per year.

<sup>2</sup>Do not exceed the maximum use rate of 8 quarts of Gharda Triclopyr 48EC Herbicide (8 lb. ae of triclopyr) per acre per year for non-grazable areas, or 2 quarts (2 lb. ae of triclopyr) per acre per year for grazed areas, except on portions of grazed areas that meet the following requirement. The maximum application rate for spot treatments on non-cropland, rights-of-way and forestry sites that intersect grazed areas is 8 lb. ae /A/year. Apply no more than 2 quarts (2 lb. ae) per acre per growing season on rangeland, permanent grass pastures, and conservation reserve program (CRP) acres, including fence rows and non-irrigation ditch banks within these areas, or any area where grazing or harvesting of hay is allowed unless using basal bark or cut surface treatments.

**Low Volume Foliar Treatment:** To control susceptible woody plants, mix up to 5% v/v of Gharda Triclopyr 48EC Herbicide in water and apply 10 to 100 gallons of finished spray. The spray concentration of Gharda Triclopyr 48EC Herbicide and total spray volume per acre must be adjusted according to the size and density of target woody plants and kind of spray equipment used. With low volume sprays, use sufficient spray volume to obtain uniform coverage of target plants including the surfaces of all foliage, stems, and root collars (*see Use Precautions and Restrictions*). For best results, a surfactant can be added to all spray mixtures. Match equipment and delivery rate of spray nozzles to height and density of woody plants. When treating tall, dense brush, a truck mounted spray gun with spray tips that deliver up to 2 gallons per minute at 40 to 60 psi may be required. Backpack or other types of specialized spray equipment with spray tips that deliver less than 1 gallon of spray per minute may be appropriate for short, low to moderate density brush. See **Table 2** for relationship between mixing rate, spray volume and maximum application rate.

**Tank Mixing:** As a low volume foliar spray, up to 8 quarts of Gharda Triclopyr 48EC Herbicide may be applied in tank mix combination with labeled rates of Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] or Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2- pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] in 10 to 100 gallons of finished spray. Graslan L and Tordon 22K are not registered for use in the states of **California** and **Florida**.

### **Broadcast Applications with Ground Equipment**

Apply Gharda Triclopyr 48EC Herbicide using equipment that will assure thorough and uniform coverage at spray volumes applied. See **Table 2** for relationship between mixing rate, spray volume and maximum application rate.

### **Woody Plant Control**

**Foliage Treatment:** Use 4 to 8 quarts of Gharda Triclopyr 48EC Herbicide in enough water to make 5 gallons or more per acre of total spray, or 1 1/2 to 3 quarts of Gharda Triclopyr 48EC Herbicide may be combined with labeled rates of Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low volatile ester, Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2- pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] or Tordon 22K. [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] in sufficient water to make 5 gallons or more per acre of total spray. Graslan L and Tordon 22K are not registered for use in the states of **California** and **Florida**.

**Broadleaf Weed Control:** Use Gharda Triclopyr 48EC Herbicide at rates of 1 to 4 quarts in a total volume of 5 gallons or more per acre as a water spray mixture. Apply anytime weeds are actively growing. Gharda Triclopyr 48EC Herbicide at 0.25 to 3 quarts may be tank mixed with labeled rates of Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D amine or low volatile ester, Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] or Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2- pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] to improve the spectrum of activity. For thickened (high viscosity) spray mixtures, Gharda Triclopyr 48EC Herbicide can be mixed with diesel oil or another inverting agent. When using an inverting agent, read and

follow the use directions and precautions on the product label. Graslan L and Tordon 22K are not registered for use in the states of **California** and **Florida**.

### **Foliage Treatment (Utility and Pipeline Rights-of-Way)**

Use 4 to 8 quarts of Gharda Triclopyr 48EC Herbicide alone, or 3 to 4 quarts of Gharda Triclopyr 48EC Herbicide in a tank mix combination with labeled rates of Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low volatile ester, Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2-pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] or Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] and apply in a total spray volume of 10 to 30 gallons per acre. Use the higher rates and volumes when plants are dense or under drought conditions. Graslan L and Tordon 22K are not registered for use in the states of **California** and **Florida**.

### **Basal Bark, Dormant Stem and Cut Surface Treatments for use on all sites**

Individual plant treatments such as basal bark and cut surface applications may be used on any use site listed on this label at a maximum use rate of 8 quarts of Gharda Triclopyr 48EC Herbicide (8 lb ae of triclopyr) per acre. These types of applications are made directly to ungrazed parts of plants and, therefore, are not restricted by the grazing maximum rate of 2 quarts of Gharda Triclopyr 48EC Herbicide (2 lb. ae of triclopyr) per acre.

**Conventional Basal Bark Treatment:** To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 1 to 5 gallons of Gharda Triclopyr 48EC Herbicide in enough oil to make 100 gallons of spray mixture. Apply with backpack sprayer or power spraying equipment using low pressure (20 to 40 psi). Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground, thoroughly wetting the indicated area. Spray until runoff at the ground line is noticeable. Old or rough bark requires more spray than smooth young bark. Apply anytime, including the winter months, except when snow or water prevent spraying to the ground line.

**Low Volume Basal Bark Treatment:** To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of Gharda Triclopyr 48EC Herbicide in enough oil to make 100 gallons of spray mixture. Apply with a backpack or sprayer using low pressure and a solid cone or flat fan nozzle. Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground in a manner that thoroughly wets the lower stems, including the root collar area, but not to the point of runoff. Herbicide concentration can vary with size and susceptibility of species treated. Treatments may be applied throughout the year including when snow is present. Efficacy may be reduced when stem surfaces are saturated with water. See **Table 2** for relationship between mixing rate, spray volume and maximum application rate.

**Gharda Triclopyr 48EC Herbicide Plus Milestone for basal bark applications:** Mix Gharda Triclopyr 48EC Herbicide with Milestone in a commercially available basal diluent (or other oils or basal diluents as recommended by the manufacturer); the basal oil used must be compatible with a water-soluble herbicide such as Milestone. Make a stable tank mixture for basal bark application by first combining each product with a compatibility agent prior to final mixing in the desired ratio. If using a tank mix, mix the oil-based products such as Gharda Triclopyr 48EC Herbicide thoroughly with basal oil and add any other oil-based products before adding the water-based products. If the mixture stands for more than 30 minutes, reagitating may be required. Oil and water-based mixtures can separate over time. Long-term storage is not recommended without vigorous agitation prior to use or without a recommended compatibility agent.

**Gharda Triclopyr 48EC Herbicide Plus Tordon 22K in Oil Tank Mix:** Gharda Triclopyr 48EC Herbicide and Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] may be used in tank mix combination as a low volume basal bark treatment to improve control of certain woody species such as ash, elm, maple, poplar, aspen, hackberry, oak, ocean spray, birch, hickory, pine, tanoak, cherry, locust, sassafras, and multiflora rose. Tordon 22K is not registered for use in the states of **California** and **Florida**.

**Streamline Basal Bark Treatment (Southern States):** To control or suppress susceptible woody plants for conifer release, mix 20 to 30 gallons of Gharda Triclopyr 48EC Herbicide in enough oil to make 100 gallons of spray mixture. Streamline basal bark treatments are most effective on stems less than 4 inches in basal diameter. Apply with a backpack sprayer or using equipment that provides a directed straight stream spray. Apply the spray in a 2- to 3-inch-wide band to one side of stems less than 3 inches in basal diameter. When the optimum amount of spray mixture is applied, the treated zone widened to encircle the stem within approximately 30 minutes. Treat both sides of stems which are 3 to 4 inches in basal diameter. Direct the spray at bark that is approximately 12 to 24 inches above ground. Pines (loblolly, slash, shortleaf, and Virginia) up to 2 inches in diameter breast height (DBH) can be controlled by directing the spray at a point approximately 4 feet above ground. Vary spray mixture concentration with size and susceptibility of the species being treated. Better control is achieved when spray is applied to thin juvenile bark and above rough thickened mature bark. This technique is not recommended for scrub and live oak species, including blackjack, turkey, post, live, bluejack and laurel oaks, or bigleaf maple. Apply anytime, including winter months, except when snow or water prevents spraying at the desired height above ground level. **Note:** Best results with some hardwood species occur when applications are made from approximately 6 weeks prior to leaf expansion in the spring until approximately 2 months after leaf expansion is completed.

**Low Volume Stem Bark Band Treatment (North Central and Lake States):** The treatment band may be positioned at any height up to the first major branch. For best results apply the band as low as possible. Spray mixture concentration can vary with size and susceptibility of species to be treated.

**Thin Line Basal Bark Treatment:** To control susceptible woody plants with stems less than 6 inches in diameter, apply Gharda Triclopyr 48EC Herbicide, either undiluted or mixed at 50 to 75% v/v with oil, in a thin stream to all sides of the lower stems. The stream is directed horizontally to apply a narrow band of Gharda Triclopyr 48EC Herbicide around each stem or clump. Use a minimum of 2 to 15 milliliters of Gharda Triclopyr 48EC Herbicide or oil mixture with Gharda Triclopyr 48EC Herbicide to treat single stems and from 25 to 100 milliliters to treat clumps of stems. Use an applicator metered or calibrated to deliver the small amounts required.

### **Dormant Stem Treatment**

Dormant stem treatments will control susceptible woody plants and vines with stems less than 2 inches in diameter. Plants with stems greater than 2 inches in diameter may not be controlled and resprouting may occur. This treatment method is best suited for sites with dense, small diameter brush. Dormant stem treatments of Gharda Triclopyr 48EC Herbicide can also be used as a chemical side-trim for controlling lateral branches of larger trees that encroach onto roadside, utility, or other rights-of-way.

High volume and low volume applications using backpacks deliver approximately the same amount of herbicide per acre but differ in delivery volumes to achieve that rate.

**High Volume Applications:** Mix 4 to 8 quarts of Gharda Triclopyr 48EC Herbicide in 2 to 3 gallons of crop oil concentrate or other recommended oil and add this mixture to enough water to make 100 gallons of spray solution. Use continuous adequate agitation. Apply using low pressure (20 to 40 psi). In western states, apply any time after woody plants are dormant and most of the foliage has dropped. In other areas apply anytime within 10 weeks of budbreak (between February through April). Gharda Triclopyr 48EC Herbicide may be mixed with 4 quarts of Weedone 170 herbicide to improve the control of black cherry and broaden the spectrum of herbicidal activity. Do not apply to wet or saturated bark as poor control may result.

**Low Volume Applications:** Mix Gharda Triclopyr 48EC Herbicide at 4 to 6 gallons and 2 to 3 gallons of crop oil concentrate or other recommended oil and add this mixture to enough water to make 100 gallons of spray solution. Use continuous adequate agitation. Apply with backpack or other low volume spraying equipment, using low pressure (20 to 40 psi). Gharda Triclopyr 48EC Herbicide may be mixed with other herbicides to broaden the spectrum of herbicidal activity. Do not apply to wet or saturated bark as poor control may result.

## Cut Surface

Cut surface applications with Gharda Triclopyr 48EC Herbicide can be made any time after cutting up to re-sprouting. After re-sprouting basal bark or foliar applications are more suitable.

**Basal Cut Stump Treatment:** To control resprouting, mix 20 to 30 gallons of Gharda Triclopyr 48EC Herbicide in enough oil to make 100 gallons of spray mixture. Apply with a backpack sprayer using low pressures and a solid cone or flat fan nozzle. Spray the root collar area and any exposed roots of root suckering species, sides of the stump, and the outer portion of the cut surface, including the cambium, until thoroughly wet, but not to the point of runoff. Spray mixture concentration can vary with size and susceptibility of species treated, using the higher rate for larger stumps, stumps with thicker bark or harder to control plants. Apply anytime, including in winter months, except when snow or water prevent spraying to the ground line.

**Cut Stump Treatment:** To control resprouting of difficult to control species like salt cedar and other *Tamarix* species, bigleaf maple, tanoak, Oregon myrtle, and other susceptible species, apply Gharda Triclopyr 48EC Herbicide as a 50% dilution v/v in water by spraying all the exposed cambium layer on the freshly cut surface, or use undiluted Gharda Triclopyr 48EC Herbicide immediately after cutting. Use of undiluted Gharda Triclopyr 48EC Herbicide is most effective for hard-to-control species. Treatments may be applied throughout the year; however, control may be reduced with treatment during periods of moisture stress as in late summer or early spring sap flow. Cut stumps so that they are approximately level to facilitate uniform coverage of Gharda Triclopyr 48EC Herbicide. Use an applicator that can be calibrated to deliver the small amounts of material required.

## Forest Management Applications

All application methods described on this label may be used on forest management sites.

For broadcast applications, apply 1 to 6 quarts of Gharda Triclopyr 48EC Herbicide per acre in a total spray volume of 5 to 25 gallons per acre by air or 10 to 100 gallons per acre by ground. Use spray volumes sufficient to provide thorough coverage of treated foliage. Nozzles or additives that produce larger droplets of spray may require higher spray volumes to provide adequate coverage.

**Plant Back Interval for Conifers:** Conifers planted sooner than one month after treatment with Gharda Triclopyr 48EC Herbicide at less than 4 quarts per acre or sooner than two months after treatment at 4 to 6 quarts per acre may be injured. When tank mixtures of herbicides are used for forest site preparation, labels for all products in the mixture must be consulted and the longest waiting period observed.

## Forest Site Preparation (Not for Conifer Release)

**Southern States Including Alabama, Arkansas, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia:** To control susceptible woody plants and broadleaf weeds, apply Gharda Triclopyr 48EC Herbicide at a rate of 4 to 6 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 2 to 4 quarts of Gharda Triclopyr 48EC Herbicide per acre in tank mix combination with labeled rates of Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2-pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] or Tordon 22K. [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt]. Graslan L and Tordon 22K are not registered for use in the state of **Florida**. Where grass control is also desired, Gharda Triclopyr 48EC Herbicide, alone or in combination with Tordon 22K or Graslan L, may be applied with labeled rates of other herbicides registered for grass control in forests. Use of tank mix products must be in accordance with the most restrictive of label limitations and precautions. Do not exceed labeled application rates. Gharda Triclopyr 48EC Herbicide cannot be tank mixed with any product containing a label prohibition against such mixing.

**In Western, Northeastern, North Central, and Lake States (States Not Listed Above as Southern States):** To control susceptible woody plants and broadleaf weeds, apply Gharda Triclopyr 48EC Herbicide at a rate of 3 to 6 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 1.5 to 3 quarts per acre of Gharda Triclopyr 48EC

Herbicide in tank mix combination with labeled rates of Graslan L [EPA Reg. No.: 62719-655 a premix of picloram: 4-amino-3,5,6-trichloro-2- pyridinecarboxylic acid triisopropanolamine salt plus 2,4-D: (2,4-dichlorophenoxy) acetic acid, choline salt] or Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt], or Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low volatile ester. Freelexx. Graslan L and Tordon 22K are not registered for use in the state of **California**. Where grass control is also desired, Gharda Triclopyr 48EC Herbicide, alone or in tank mix combination with Graslan L or Tordon 22K, may be applied with labeled rates of other herbicides registered for grass control in forests. When applying tank mixes, follow applicable use directions and precautions on each product label.

**Southern Coastal Flatwoods:** To control susceptible broadleaf weeds and woody species such as gallberry and wax-myrtle, and for partial control of saw-palmetto, apply 2 to 4 quarts of Gharda Triclopyr 48EC Herbicide per acre. To broaden the spectrum of species controlled to include fetterbush, staggerbush, titi, and grasses, apply 2 to 3 quarts per acre of Gharda Triclopyr 48EC Herbicide in tank mix combination with labeled rates of Arsenal Applicator's Concentrate herbicide. Where control of gallberry, wax-myrtle, broadleaf weeds, and grasses is desired, apply 2 to 3 quarts of Gharda Triclopyr 48EC Herbicide per acre in tank mix combination with labeled rates of Accord Concentrate or Accord XRT II Herbicide [EPA Reg. No.: **62719-324 containing the active ingredient** glyphosate: N-(phosphonomethyl)glycine, dimethylamine salt].

These treatments may be broadcast during site preparation of flat planted or bedded sites or, on bedded sites, applied in bands over the top of beds. For best results, apply in late summer or fall. Efficacy may not be satisfactory when applications are made in early season prior to August.

**Note:** Do not apply after planting pines.

### **Directed Sprays Applications for Conifer Release**

To release conifers from competing hardwoods and brush such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, hickory, alder, birch, aspen, pin cherry, *Ceanothus* spp., blackberry, chinquapin, and poison oak, mix 4 to 20 quarts of Gharda Triclopyr 48EC Herbicide in enough water to make 100 gallons of spray mixture. This spray mixture is directed onto foliage of competitive hardwoods using backpack sprayers with flat fan nozzles or equivalent any time after the hardwoods and brush have reached full leaf size, but before autumn coloration. The majority of treated hardwoods and brush must average less than 6 feet in height to ensure adequate spray coverage. Take care to direct spray solutions away from contact with conifer foliage, particularly foliage of desirable pines. See **Table 2** for relationship between mixing rate, spray volume and maximum application rate. **Note:** Spray may cause temporary damage and growth suppression where contact with conifers occurs; however, injured conifers can recover and grow normally. Over-the-top spray applications can kill pines.

**Broadcast Applications for Mid-Rotation Understory Brush Control in Southern Coastal Flatwoods Pine Stands (Ground Equipment Only):** For control of susceptible species, such as gallberry and wax-myrtle, and broadleaf weeds, apply 2 to 4 quarts of Gharda Triclopyr 48EC Herbicide per acre. To broaden the spectrum of woody plants controlled to include fetterbush, staggerbush, and titi, apply 2 to 3 quarts of Gharda Triclopyr 48EC Herbicide per acre in tank mix combination with labeled rates of Arsenal Applicator's Concentrate. Saw-palmetto will be partially controlled by use of Gharda Triclopyr 48EC Herbicide at 4 quarts per acre or by mixtures of Gharda Triclopyr 48EC Herbicide at 2 to 3 quarts per acre in tank mix combination with either Arsenal Applicator's Concentrate or Escort herbicide. These mixtures must only be broadcast applied over target understory brush species, but to prevent injury to pines, make applications underneath the foliage of pines. Apply sprays in 30 gallons or more per acre of total volume. For best results, apply in late summer or fall. Efficacy may not be satisfactory when applications are made in early season prior to August.

**Broadcast Applications for Conifer Release in the Pacific Northwest and California Dormant Conifers Before Bud Swell (Excluding Pines):** To control or suppress deciduous hardwoods such as vine maple, bigleaf maple, alder, scotch broom, or willow before leaf-out, or evergreen hardwoods

such as madrone, chinquapin, and *Ceanothus* spp., use Gharda Triclopyr 48EC Herbicide at 1 to 2 quarts per acre. Use diesel or fuel oil as a diluent or use water plus 1 to 2 gallons per acre of diesel oil or a suitable surfactant or oil substitute at manufacturer's recommended rates. Mixing with oil as the only diluent requires vigorous agitation to form an oil solution. Once a solution is formed it will stay stable.

**Conifer Plantations (Excluding Pines) After Hardwoods Begin Growth and Before Conifer Bud Break ("Early Foliar" Hardwood Stage):** Use Gharda Triclopyr 48EC Herbicide at 1 to 1.5 quarts alone or with Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or 2,4-D low volatile ester herbicide in water carrier to provide no more than 3 lb. ae per acre from both products. After conifer bud break, these sprays may cause more serious injury to the crop trees. Use of a surfactant may cause unacceptable injury to conifers especially after bud break.

**Conifer Plantations (Excluding Pines) After Conifers Harden Off In Late Summer and While Hardwoods Are Still Growing Actively:** Use Gharda Triclopyr 48EC Herbicide at rates of 1 to 1.5 quarts per acre alone or with Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low volatile ester. Treat as soon after conifer bud hardening as possible so that hardwoods and brush are actively growing. Use of oil, oil substitute, or surfactant may cause unacceptable injury to the conifers.

**Broadcast Applications for Conifer Release in the Eastern United States:** To release spruce, fir, red pine, and white pine from competing hardwoods such as red maple, sugar maple, striped maple, alder, birch (white, yellow, and grey), aspen, ash, pin cherry, and *Rubus* spp. and perennial and annual broadleaf weeds, use Gharda Triclopyr 48EC Herbicide at rates of 1.5 to 3 quarts per acre alone or with Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D amine or low volatile ester. Apply in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

**Broadcast Applications for Conifer Release in the Lake States Region:**

To release spruce, fir, and red pine from competing hardwoods such as aspen, birch, maple, cherry, willow, oak, hazel, and *Rubus* spp. and perennial and annual broadleaf weeds, use Gharda Triclopyr 48EC Herbicide at rates of 1.5 to 3 quarts per acre. Apply in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

**Application Directions for Rangeland, Permanent Grass Pastures, and Conservation Reserve Program (CRP) Acres**

To control susceptible woody plants, use the specified rate of Gharda Triclopyr 48EC Herbicide alone or in a tank mix to make 100 gallons of spray mixture. For rangeland and permanent pasture sites, make 1 application per year and apply no more than 2 quarts of Gharda Triclopyr 48EC Herbicide per acre. Gharda Triclopyr 48EC Herbicide may be tank mixed with other herbicides at directed rates (see application rates table below) to control a broader spectrum of woody plants and broadleaf weeds. Be sure to follow all applicable use directions, precautions, and limitations on the respective product labels when tank mixing.

Apply sufficient spray volume to thoroughly wet all leaves, stems, and root collars. Minimize spray drift by using the minimum spray pressure that provides adequate plant coverage without forming a mist and direct sprays no higher than the top of the target plants. A drift control additive cleared for application to growing crops may also be used to reduce spray drift. For best results, apply when woody plants and weeds are actively growing.

Application Rates per 100 Gallons of Spray		
Gharda Triclopyr 48EC Herbicide	Plus Tank Mix Product	Rate (qt)
1-4 qt	--	--
1-2 qt	<sup>1</sup> Grazon P+D specialty herbicide	4
1-2 pt	2,4-D low volatile ester herbicide	1-2



1-2 qt	Tordon or Picloram 22K specialty herbicide	1-2
2 qt	Reclaim specialty herbicide <sup>1,2</sup>	2

<sup>1</sup> Reclaim [EPA Reg. No.: 62719-83 containing the active ingredient clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt] is registered for use only in **Arizona, Texas, Oklahoma** and **New Mexico**. Grazon P+D [EPA Reg. No.: 62719-182 is a premix of Picloram Triisopropanolamine Salt plus 2,4-D Triisopropanolamine Salt].

<sup>2</sup> See directions for Mesquite Control Using High Volume Foliage Treatment below.

**Mesquite Control Using High Volume Foliage Treatment:** To control low to moderate density mesquite infestations, apply a tank mixture of Gharda Triclopyr 48EC Herbicide and Reclaim to individual plants with a backpack or hand-held sprayer or a vehicle-mounted sprayer with hand-held spray wand or spray gun. For individual plant treatment, use 2 quarts of Gharda Triclopyr 48EC Herbicide with 2 quarts of Reclaim per 100 gallons of total spray solution ( $\frac{1}{2}$  % v/v of each product). Apply in water or as an oil-water emulsion as described in the *Mixing Directions Section*. If an oil-water emulsion is used, add the oil at a rate of 5% of the total spray volume. Apply as a complete spray-to-wet foliar application, including all leaves. Thorough coverage is necessary for good results, but do not spray to the point of runoff. This application method works best for brush less than 8 feet tall since efficient treatment and thorough coverage of taller brush is difficult to achieve using this method. Do not apply when mesquite foliage is wet. The total amount of Reclaim applied should not exceed  $1 \frac{1}{3}$  pints per acre. For best results, follow information given elsewhere in this label concerning effect of environmental conditions and application timing on control. To minimize drift, select a spray nozzle and pressure that generates a coarse spray and provides good coverage. Drift may be reduced by directing sprays no higher than the top of target plants and by using the minimum pressure necessary to obtain plant coverage without forming a mist. If desired, a spray dye may be added to the spray mixture to mark the treated plants coverage without forming a mist. If desired, a spray dye may be added to the spray mixture to mark the treated plants.

**Broadcast Application with Aerial or Ground Equipment:** Environmental conditions and application timing influence brush and weed control results. For best results, apply when woody plants and weeds are actively growing. For woody species, apply after the rapid growth period of early spring when leaf tissue is fully expanded, and terminal growth has slowed. Brush regrowth must be at least 4 ft high prior to treatment to insure adequate foliage for herbicide absorption. Adequate soil moisture before and after treatment as well as the presence of healthy foliage at the time of application are important factors contributing to optimal herbicidal activity. Use sufficient spray volume to cover foliage completely and uniformly. For ground application, apply 10 gallons or more of total spray volume per acre. For aerial application, apply at least 2 gallons of total spray volume per acre. Use higher spray volumes for ground or aerial applications to ensure adequate coverage with increased depth and density of foliage, particularly for treatment of woody plants.

**Mesquite:** The herbicidal response of mesquite is strongly influenced by foliage condition, growth stage and environmental conditions. For best results, apply when new growth foliage has turned from light to dark green, when the soil temperature is above 75°F at a depth of 12 to 18 inches, and soil moisture is adequate for plant growth. Apply within 60 days after the 75°F minimum soil temperature at the 12- to 18-inch depth has been reached. Product performance may be adversely affected if application is made before mesquite foliage has turned from light to dark green or if foliage has been injured or removed by late frost, insects, hail or plant diseases. Do not treat if mesquite exhibits new (light green) terminal growth in response to recent heavy rainfall during the growing season. Rate of soil warm-up at the 12- to 18-inch depth may vary with soil texture and drainage. Coarse-textured (sandy) soils warm up sooner than fine-textured (clay) soils and dry soils warm up more quickly than wet soils. Mesquite regrowth must be at least 4 ft high prior to treatment to insure adequate foliage for herbicide absorption.

**Mesquite Only:** Apply  $\frac{1}{2}$  to 1 pint of Gharda Triclopyr 48EC Herbicide per acre in combination with Sendero. See the Sendero label for additional treatment recommendations and information on mesquite control. Apply aurally as an oil: water emulsion in 4 gallons or more total volume per acre

or with ground equipment in 10 gallons or more total volume per acre. Use a maximum of 1 gallon of oil per acre for aerial or ground application.

### **Sand Shinnery Oak Suppression**

In **Texas, New Mexico, and Oklahoma**, apply Gharda Triclopyr 48EC Herbicide alone at a rate of 1/2 to 2 pints per acre for suppression of shinnery oak growing on sandy soils. Grass response following suppression may be impressive where rainfall is adequate. Grazing deferment following application together with proper grazing management is recommended to allow for the reestablishment of grass stands.

### **Post Oak and Blackjack Oak Suppression - Regrowth Stands**

Apply in the late spring (May) to early summer (June-July) when oak leaves are fully developed (expanded). Use 2 quarts of Gharda Triclopyr 48EC Herbicide alone or in tank mix combination with Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low-volatile ester herbicide per acre. Apply in an oil: water emulsion or water surfactant dilution in sufficient total volume per acre to assure thorough coverage, usually 5 gallons or more per acre by fixed-wing aircraft or helicopter or 15 to 25 gallons per acre by ground equipment. Use a maximum of 1 gallon of oil per acre for aerial or ground application. Lower rates may be used for suppression only. Control will require at least 3 consecutive treatments. **Note:** Regrowth plants have a large root mass relative to top growth when compared to undisturbed plants. For top growth to intercept and translocate enough herbicide to control the roots, delay broadcast treatment until top growth is at least 4 ft tall.

**High Volume Foliage Treatment:** For regrowth less than 4 ft tall, apply 2 quarts of Gharda Triclopyr 48EC Herbicide per 100 gallons of water and 2 quarts of ag surfactant alone or in tank mix combination with GrazonNext HL [EPA Reg. No.:62719-628, a premix of Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro-, plus, Dimethyl amine salt of (2,4-dichlorophenoxy) acetic acid] or Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt]. Apply as a high-volume leaf-stem treatment to individual plants using ground equipment.

### **Post Oak and Blackjack Oak - Mature Stands**

For control of mature stands (greater than 5 ft tall), apply 2 quarts of Gharda Triclopyr 48EC Herbicide per acre in late spring (May) to early summer (June-July) when oak leaves are fully developed (expanded). Understory species such as winged elm, buckbrush, tree huckleberry and ash occurring in some areas will not be controlled (only suppressed or defoliated) by using Gharda Triclopyr 48EC Herbicide alone. Where these understory species occur, control may be improved by tank mixing 2 quarts of Gharda Triclopyr 48EC Herbicide with Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] or GrazonNext HL [EPA Reg. No.:62719-628, a premix of Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro-, plus, Dimethyl amine salt of (2,4-dichlorophenoxy) acetic acid] per acre. For best results, apply as an oil: water emulsion in a total volume of 5 gallons per acre or more by fixed-wing aircraft or helicopter.

### **Other Susceptible Woody Plants**

Apply 2 to 4 pints of Gharda Triclopyr 48EC Herbicide alone or in combination with Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D low volatile ester or amine formulation per acre. If difficult to control species such as ash, choke cherry, elm, maple, or oaks are prevalent, and during applications made when plants are mature late in the summer or during drought conditions, use the higher rates of Gharda Triclopyr 48EC Herbicide, alone or with Freelexx or 2,4-D. Gharda Triclopyr 48EC Herbicide may also be applied in a tank mixture with GrazonNext HL [EPA Reg. No.:62719-628, a premix of Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro-, plus, Dimethyl amine salt of (2,4-dichlorophenoxy) acetic acid] or Tordon 22K [EPA Reg. No.: 62719-6 containing picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt] for increased control of certain species. See labels for GrazonNext HL and Tordon 22K for additional information and treatment instructions. Apply aurally in 4 gallons or more total volume per acre or with ground equipment in

10 gallons or more total volume per acre. For best results on blackberry, apply during or after bloom. For management of kudzu, apply 1 quart of Gharda Triclopyr 48EC Herbicide per acre. Repeat application may be necessary to achieve desired level of control.

### **Susceptible Broadleaf Weeds**

Use 2 pints of Gharda Triclopyr 48EC Herbicide per acre in a water spray. Apply as a broadcast spray in a total volume of 10 gallons or more per acre by ground equipment or aerially in a total volume of 2 gallons or more per acre. Apply anytime the weeds are actively growing. Gharda Triclopyr 48EC Herbicide at  $\frac{1}{2}$  to 3 pints may be tank mixed with Freelexx [EPA Reg. No.: 62719-634 containing the active ingredient 2,4-Dichlorophenoxyacetic acid, choline salt] or a 2,4-D amine or low volatile ester.

### **Basal Bark and Dormant Stem Treatments**

Individual plant treatments such as basal bark and cut surface applications may be used on any use site listed on this label at a maximum use rate of 8 lb. ae of triclopyr per acre. These types of applications are made directly to un-grazed parts of plants and, therefore, are not restricted by the grazing maximum rate of 2 lb. ae of triclopyr per acre. See above in the *Section Basal Bark, Dormant Stem and Cut Surface Treatments* for additional use information.

**Low Volume Basal Bark Treatment:** To control susceptible woody plants such as mesquite, huisache, red maple, red and white oak, birches and aspen with stems less than 6 inches in basal diameter.

**Streamline Basal Bark Treatment:** To control or suppress susceptible woody plants such as mesquite, huisache, red maple, white and redoak, elbowbush, greenbriar, hackberry, pricklyash, yaupon and wild grape

### **Cut Stump, Basal Cut Stump, Dormant Stem, Thin Line Basal Bark Treatments**

To control resprouting, apply undiluted Gharda Triclopyr 48EC Herbicide to wet the cambium and adjacent wood around the entire circumference of cut stumps. Treatments may be applied throughout the year; however, control may be reduced with treatment during periods of moisture stress as in late summer. Cut stumps so that they are approximately level to facilitate uniform coverage of Gharda Triclopyr 48EC Herbicide. Use an applicator which can be calibrated to deliver the small amounts of material required.

### **Growing Point and Leaf Base (Crown) Treatment of Yucca**

Prepare a 2% v/v solution of Gharda Triclopyr 48EC Herbicide in basal oil, diesel, or fuel oil (13 fl. oz. of Gharda Triclopyr 48EC Herbicide in 5 gallons of spray mixture). Thoroughly wet the center of the plant including growing point and leaf bases to the soil surface. Complete coverage of leaves is not necessary.

### **Application Directions for Ornamental Turf**

See *PLANTS CONTROLLED BY GHARDA TRICLOPYR 48EC HERBICIDE Section of this label* for a list of broadleaf weeds controlled by Gharda Triclopyr 48EC Herbicide.

**Spot Treatment:** For spot treatments, do not apply more than 2 quarts of Gharda Triclopyr 48EC Herbicide per acre in a single application.

**Foliar Treatment:** Foliar sprays offer best control when applied during warm weather, from early spring through fall, when weeds are actively growing. Broadleaf weeds germinate at different times. Only emerged weeds present at the time of application will be controlled. Cut newly seeded turf 2 or 3 times before being treated. When making applications to mature plants, hard-to-control species, or during drought conditions, use higher rates. Application under drought conditions may provide less than desirable results. Use low pressure sprays to minimize spray drift. Do not water for 24 hours after application.

**Mixing Instructions:** When Gharda Triclopyr 48EC Herbicide is mixed separation may occur unless the spray mixture is agitated continuously (*See Mixing Directions for all Use Sites Section of this label*). Add about one-half the required amount of clean water to the spray tank. Start agitation and add the specified amount of Gharda Triclopyr 48EC Herbicide. Provide moderate agitation while completing the addition of water and during application.

**Broadcast Treatment of Ornamental Turf:** Apply ½ to 1 quart per acre of Gharda Triclopyr 48EC Herbicide in enough water to provide uniform coverage of the target area to control actively growing broadleaf weeds growing in perennial bluegrass, perennial ryegrass, or tall fescue on unimproved rough turf grasses, sod farms, ornamental turf, and golf courses.

**Turf Restrictions:**

- Do not apply Gharda Triclopyr 48EC Herbicide to golf course greens.
- Do not apply to sod farms in **Arizona**.
- Do not reseed treated areas for a minimum of 3 weeks after treatment. (This Restriction does not apply when bermudagrass turf is overseeded with perennial ryegrass at a minimum reseeding of 400 lbs. per acre.)

**Turf Precautions:**

- While established grasses are tolerant to this product, newly seeded grasses may be injured until well established (as indicated by vigorous growth, tillering and the development of a secondary root system). Do not reseed treated areas for a minimum of three weeks after treatment.
- Do not apply to other turfgrass species such as bahiagrass, bentgrass, bermudagrass, centipedegrass, St. Augustine grass, or zoysiagrass unless injury can be tolerated.
- To minimize turf injury, do not treat if turf is under heat-or drought-stress and make repeat applications at least 4 weeks apart.

**Tank Mixing:** To improve the spectrum of activity, Gharda Triclopyr 48EC Herbicide may be tank mixed at a rate of ½ to 1 pint per acre with directed rates of low volatile amine or ester formulations of 2,4-D, MCPP, or other labeled postemergence broadleaf herbicides. Refer to tank mix product labels for specific use directions, precautions, and limitations before use.

**Spot Treatment of Ornamental Turf:** Mix  $\frac{3}{8}$  to  $\frac{3}{4}$  fluid ounces of Gharda Triclopyr 48EC Herbicide per 1000 square feet in enough water to provide uniform coverage of the target area and apply at any time broadleaf weeds are susceptible. **Note:** Do not apply more than 2 quarts per acre or 1  $\frac{1}{2}$  fluid ounces per 1000 square feet of Gharda Triclopyr 48EC Herbicide in a single application.

**Control of Kikuyu grass (*Pennisetum Clandestinum*):** Apply Gharda Triclopyr 48EC Herbicide at a rate of ½ to 1 quart per acre. To improve activity, MSMA herbicide may be tank mixed with the ½ quart per acre rate of Gharda Triclopyr 48EC Herbicide. Three to four additional applications at 4-to-6-week intervals may be required to achieve control of kikuyu grass.

**Suppression of Bermuda grass (*Cynodon Dactylon*):** Apply Gharda Triclopyr 48EC Herbicide at the rate of 1 quart per acre. Three to four additional applications at 4-week intervals will be required to give adequate suppression of bermudagrass and allow fescue or other desired turfgrass species to dominate. To improve suppression and control of bermudagrass, 1 quart per acre of Gharda Triclopyr 48EC Herbicide may be tank mixed with a postemergence grass herbicide registered for this use pattern. Three to four additional applications of this tank mix at 4-week intervals must be made to achieve control. Reseeding following application will accelerate the transition to cool season turf (see *Reseeding Precautions above*).

**Growing Point and Leaf Base (Crown) Treatment of Yucca**

Prepare a 2% v/v solution of Gharda Triclopyr 48EC Herbicide in basal oil, diesel, or fuel oil (13 fl oz of Gharda Triclopyr 48EC Herbicide in 5 gallons of spray mixture). Thoroughly wet the center of the plant including growing point and leaf bases to the soil surface. Complete coverage of leaves is not necessary.

**Conservation Reserve Program (CRP) for Established Permanent Grass Stands**

Use Gharda Triclopyr 48EC Herbicide on CRP acres only after perennial grasses are well established.

**Broadcast Application Ground or Aerial:** Apply 1 to 2 pints of Gharda Triclopyr 48EC Herbicide per acre for small weed control or up to 1  $\frac{1}{2}$  quarts of Gharda Triclopyr 48EC Herbicide per acre for deep-rooted perennial and susceptible woody species control. Use enough water to deliver 10 gallons or more per acre by ground or 2 gallons or more per acre by air of total spray volume.

**CRP Restrictions:**

- On CRP acres, apply no more than 1 1/2 quarts of Gharda Triclopyr 48EC Herbicide per acre per year.
- Do not apply more than 2 applications of Gharda Triclopyr 48EC Herbicide per acre per year.
- Minimum retreatment interval is: 28 days
- When applying to CRP lands, follow all applicable local, state and federal regulations established for the USDA Acreage Conservation Reserve Program.
- Follow the cropping and haying restrictions for grazing livestock and dairy animals listed under *Use Rate Restrictions for Pasture and Rangeland* in the *Product Information Section* of this label.
- Do not use Gharda Triclopyr 48EC Herbicide if legume crops are overseeded as a desired cover crop in CRP established permanent grass stands.

## Conditions of Sale and Warranty

*If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.*

### Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Gharda Chemicals International Inc or the seller. To the extent permitted by applicable law, all such risks shall be assumed by buyer.

### Notice of Warranty and Disclaimer

Seller warrants that at the time of delivery the product in this container conforms to its chemical description contained hereon and is reasonably fit for its intended purpose under normal conditions of use. This is the only warranty made on this product. To the extent permitted by applicable law, Seller expressly disclaims any implied warranties of merchantability or fitness for any particular purpose and, except as set forth above, any other express or implied warranties. Any damages arising from breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid for this product by Buyer and shall not include incidental or consequential damages such as, but not limited to, loss of profits or values. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of the Seller. To the extent permitted by applicable law, Seller is liable for the consequential, special, or indirect damages resulting from the use or handling of this product. To the extent consistent with applicable law, the Buyer shall assume all such risks. Buyer acknowledges the use of its own independent skill and expertise in the selection and use of the product and does not rely on any oral or written statements or representations.

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**Net Contents (    ) Gallons (    ) Liters**