



Quinclorac 75 DF

Herbicide

ACTIVE INGREDIENT:**% BY WT.**

Quinclorac: 3,7-dichloro-8-quinolinecarboxylic acid	75.0%
OTHER INGREDIENTS:	<u>25.0%</u>
TOTAL:	100.0%

EPA Reg. No. 66222-160

EPA Est. No. 37429-GA-001^{BT}; 37429-GA-002^{BO}

Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing.

For additional First Aid, precautionary, handling, and use statements, see inside of this booklet.

Net Weight: 1 Pound

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EPA101909/Rev B

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FIRST AID	
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Prosar at 1-877-250-9291 for emergency medical treatment information.	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as butyl rubber \geq 14 mils, natural rubber \geq 14 mils, neoprene rubber \geq 14 mils, or nitrile rubber \geq 14 mils
- Shoes plus socks

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

ENGINEERING CONTROL STATEMENTS: When handlers use closed systems or

enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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 by cleaning of equipment or disposal of rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide 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, and water is:

- Coveralls
- Chemical-resistant gloves such as butyl rubber \geq 14 mils, natural rubber \geq 14 mils, neoprene rubber \geq 14 mils, or nitrile rubber \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 until sprays have dried.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees. Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the aerial drift reduction advisory information presented below.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind, Temperature and Humidity**, and **Temperature Inversion** sections of this label).

Controlling Droplet Size

- **Volume**-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Apply PrimeraOne Quinclorac 75 DF in 3-10 gallons of spray volume per acre.
- **Pressure**-Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE HIGHER FLOW RATE NOZZLES INSTEAD OF INCREASING PRESSURE.** Use a maximum of 40 psi (measured at the boom, not at the pump or in the line).
- **Number of Nozzles**-Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation**-Orienting nozzles so that the spray is released backward (the downward angle of the nozzles on fixed wing aircraft should not be greater than 20°) or parallel to the airstream on helicopters will produce larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type**-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using

low-drift nozzles. Some nozzle examples are CP Lund or flat fans with angles of 25°-65°. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types. If using nozzle screens, do not use screens finer than the 50-mesh size as nozzle plugging is possible.

- **Boom Length**-For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height**-Applications may not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

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

Wind

Drift potential is lowest between wind speeds of 2-10 mph; however, many factors including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. Do not apply PrimeraOne Quinclorac 75 DF when wind is blowing more than 8 mph. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

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

Temperature Inversions

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

Sensitive Areas

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

TURFGRASS

Used as a postemergence spray, PrimeraOne Quinclorac 75 DF controls many broadleaf and grass weeds in turfgrasses growing in sites including but not limited to grounds or lawns around residential and commercial establishments, multi-family dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, and sod farms (except Arizona).

The state of Arizona has not approved this product for use on sod farms (an agricultural use). This product may not be used in Arizona for any other uses considered by the Arizona statutes to be agricultural uses.

The weed foliage and roots absorb PrimeraOne Quinclorac 75 DF and translocate it throughout the weed. Treated weeds will show signs of leaf and stem curling or twisting, stunting, change color from green to white (chlorosis), finally to red, and become necrotic before finally dying. Refer to the tables below for information on **WEEDS CONTROLLED** and **TOLERANT TURFGRASS SPECIES**.

Restrictions and Limitations

- **DO NOT** apply more than 2 pounds of PrimeraOne Quinclorac 75 DF per acre per year (equivalent to 0.73 oz per 1000 sq ft per year or 1.5 lbs ai per acre per year).
- **DO NOT** apply to golf course collars or greens.
- **DO NOT** make applications of PrimeraOne Quinclorac 75 DF to turfgrass under stress from drought. Optimum results are obtained if weeds are not under stress from lack of water, excessive water, low fertility, mowing shock, excessive hot or cold temperatures, or injury from other herbicide applications.
- **DO NOT** apply to fine fescue unless it is part of a seed blend.
- **DO NOT** apply to Bahiagrass, carpetgrass, St. Augustinegrass, Centipedegrass, dichondra, or lawns or turf where desirable clovers are present.
- **DO NOT** apply within 4 weeks after seedling emergence of Kentucky bluegrass, creeping bentgrass, fine fescue blends, and perennial ryegrass.
- **DO NOT** apply to exposed feeder roots of trees or ornamentals. Be particularly careful within the drip line of trees and other ornamental species.
- **DO NOT** apply into any ornamental bed.
- **DO NOT** use clippings as mulch or compost around flowers, ornamentals, trees, or in vegetable gardens.

- **DO NOT** plant eggplant or tobacco within 12 months on fields treated with PrimeraOne Quinclorac 75 DF.
- **DO NOT** plant tomatoes or carrots within 24 months on fields treated with PrimeraOne Quinclorac 75 DF.
- **DO NOT** apply when conditions favor drift from target area. Apply when wind speed is less than 10 mph as drift may cause damage or death of nontarget area vegetation.
- Use a lawn-type sprayer with coarse spray to reduce drift from wind.
- Avoid spray mist from contacting vegetables, flowers, ornamentals, shrubs, trees, and other desirable plants, especially plants belonging to the *Solanaceae* family (tomatoes, eggplant, and bell peppers). **DO NOT** pour spray solutions near these plants.
- **DO NOT** use to formulate or reformulate any other pesticide product which is not registered by EPA.
- **DO NOT** apply by air or through any type of irrigation equipment.
- **The state of Arizona has not approved this product for use on sod farms (an agricultural use). This product may not be used in Arizona for any other uses considered by the Arizona statutes to be agricultural uses.**

APPLICATION INFORMATION

Use broadcast or spot sprays to apply PrimeraOne Quinclorac 75 DF postemergence to actively growing weeds. The use rates and tolerant turfgrasses are listed in the tables below. **DO NOT** apply more than the labeled rates. Follow all use restrictions listed above under **Restrictions and Limitations**.

Mowing: **DO NOT MOW 2 DAYS BEFORE OR AFTER APPLYING PRIMERAONE QUINCLORAC 75 DF.** This practice will maximize weed control and minimize potential turf injury. **Leave clippings from the first three mowings on the treated area.**

Irrigation and Rainfall: If soil is dry before a PrimeraOne Quinclorac 75 DF application, irrigation of the turfgrass may improve weed control. For best results, **DO NOT** water or irrigate for 24 hours after a PrimeraOne Quinclorac 75 DF application. Irrigate the treated turfgrass with at least ½ inch of water 2 to 7 days after application if no rainfall is received within that period.

TOLERANT TURFGRASS SPECIES (ESTABLISHED)

Highly Tolerant	Moderately Tolerant	Susceptible
Bermudagrass, Common* Bluegrass, Annual Bluegrass, Kentucky Buffalograss Fescue, Tall Ryegrass, Annual Ryegrass, Perennial Zoysiagrass	Bentgrass, Creeping* Bermudagrass, Hybrid* Bluegrass, Rough (<i>Poa trivialis</i>) Fescue, Chewing's Fescue, Fine** Fescue, Hard Fescue, Red Paspalum, Seashore	Bahiagrass Bentgrass, Colonial Bentgrass, Seaside Centipedegrass Dichondra St. Augustinegrass
* To reduce yellowing on these species, add chelated iron or sprayable soluble nitrogen fertilizers (refer to the ADJUVANTS section below). ** Apply PrimeraOne Quinclorac 75 DF herbicide to fine fescue only when it is part of a blend. DO NOT use on golf course greens and collars. See additional information for fine fescue in blends under the section on SEEDING, OVERSEEDING, AND SPRIGGING.		

ADJUVANTS

To achieve consistent weed control, include an adjuvant in the spray solution with PrimeraOne Quinclorac 75 DF. Applied in combination with PrimeraOne Quinclorac 75 DF, adjuvants may cause slight turfgrass leaf burn; however, new growth will resume, and turf vigor is not reduced. To prevent leaf burn and turfgrass damage, do not apply PrimeraOne Quinclorac 75 DF when relative humidity and temperatures are high. Keep the mowing heights higher to avoid turf stress and the possibility of turf injury. Some turfgrass species will be less affected by leaf burn or yellowing if a chelated iron or sprayable soluble nitrogen fertilizer is added to the PrimeraOne Quinclorac 75 DF tank solution.

The preferred adjuvant is methylated seed oil (MSO). DyneAmic®, Lesco Spreader Sticker®, LI-700®, Surf King® Spreader, Target Pro® Spreader, or Thoroughbred® may also be used, but under some environmental conditions, phytotoxicity or less than optimal efficacy may be observed. When an adjuvant is to be used with this product, Makhteshim Agan of North America, Inc. suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

Before selecting a methylated seed oil to use with PrimeraOne Quinclorac 75 DF, be sure that the MSO:

- is nonphytotoxic
- contains only EPA-exempt ingredients
- provides good mixing quality in the **Compatibility Test for Tank Mixtures** (below)

- has been successful under local experience
- contains emulsifiers to provide good mixing quality

DO NOT include additives when tank mixing with emulsifiable concentrate (EC) products as this may cause phytotoxicity. Consult your local Makhteshim Agan of North America, Inc. representative or distributor for instructions for your area.

TURFGRASS TANK MIXES WITH PRIMERAONE QUINCLORAC 75 DF

Before using other products in combination with PrimeraOne Quinclorac 75 DF, read and follow the **Restrictions and Limitations** and **Directions for Use** on all products' labels. Follow the most restrictive label. Consult tolerant turfgrass species on all labels. Do not tank mix with PrimeraOne Quinclorac 75 DF if all target weeds are not at the correct growth stage for treatment at the same time—in that case, make separate applications of the herbicides.

The spectrum of control of broadleaf weed species can be increased with PrimeraOne Quinclorac 75 DF in a tank mix with 2,4-D, triclopyr, MCPA, MCPP, Three Way[®], Trimec[®], or other broadleaf herbicides.

Extended residual control of annual grasses is achieved with PrimeraOne Quinclorac 75 DF in a tank mix with pendimethalin or PRE-M[®] herbicides.

Applications of PrimeraOne Quinclorac 75 DF in a tank mix with Basagran[®] SG, Basagran T/O, Lescogran[®] herbicides, Image[®] 70 DG herbicide, or MSMA can control sedge.

Some grassy weeds such as Bahiagrass or kikuyugrass are controlled by PrimeraOne Quinclorac 75 DF and MSMA tank mixes.

PrimeraOne Quinclorac 75 DF tank mixes with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers (except where noted above) have the potential for physical incompatibility, reduced weed control, or turf injury.

Before preparing a tank mix of PrimeraOne Quinclorac 75 DF with another product, perform the test **Compatibility Test for Tank Mixtures**.

SEEDING, OVERSEEDING, AND SPRIGGING

PrimeraOne Quinclorac 75 DF will not significantly interfere with turfgrass seed germination and growth of those grass types identified as tolerant or moderately tolerant in the **WEEDS CONTROLLED** table if applied before or after seeding or overseeding a turf area.

Because different bermudagrass seeds may have different germination characteristics, check the germination vigor of your seeded hybrid bermudagrass before using PrimeraOne Quinclorac 75 DF before, at seeding, and 7 days after seeding.

Additional information on the timing of PrimeraOne Quinclorac 75 DF applications in seeding, overseeding, or sprigging situations is found in the table below.

SEEDING, OVERSEEDING, AND SPRIGGING TIMING CHART¹ (SEE FOOTNOTE 1)

TURFGRASS VARIETY	Before Seeding²	At Seeding	7 Days After Emergence	14 Days After Emergence	28 Days After Emergence
Annual Bluegrass	√	√	√	√	√
Annual Ryegrass	√	√	√	√	√
Buffalograss	√	√	√	√	√
Common Bermudagrass ³ (for sprigging see footnote 3)	√	√	√	√	√
Creeping Bentgrass	√	NO	NO	NO	√
Fine Fescue (in blend)	√	NO	NO	NO	√
Hybrid Bermudagrass ³ (for sprigging see footnote 3)	√	√	√	√	√
Kentucky Bluegrass	√	NO	NO	NO	√
Perennial Ryegrass	√	√	NO	NO	√
Seashore Paspalum ^{3,4} (for sprigging see footnote 3)	NO	NO	NO	√	√
Tall Fescue	√	√	√	√	√
Zoysiagrass ³ (for sprigging see footnote 3)	√	√	√	√	√

¹ Note: √ = acceptable timing for PrimeraOne Quinclorac 75 DF applications. Time applications around the seeding operations using the above table as a reference point. Do not use an adjuvant or additive when PrimeraOne Quinclorac 75 DF herbicide applications are made on newly emerged turf seedlings until 28 days after emergence (except in the case of seashore paspalum). Apply PrimeraOne Quinclorac 75 DF at an application rate of 0.367 oz/1000 sq ft to all turfgrass species listed in this table except for seashore paspalum.

² Apply PrimeraOne Quinclorac 75 DF seven days or more before seeding.

³ Use PrimeraOne Quinclorac 75 DF at any time prior to, at, or after sprigging as indicated by turfgrass species in this table.

⁴ Make applications of 0.18 oz to 0.367 oz PrimeraOne Quinclorac 75 DF per 1000 sq ft at the times indicated in this table.

DIRECTIONS FOR MIXING PRIMERAONE QUINCLORAC 75 DF

Follow the directions below to mix PrimeraOne Quinclorac 75 DF either alone or with tank mix partners. Directions are provided for ground application equipment and for backpack sprayers.

Before mixing PrimeraOne Quinclorac 75 DF with other products, conduct a compatibility test to determine if the spray solution is stable. Follow the directions in the section **Compatibility Test for Tank Mixtures** below.

If tank mixing with products in water-soluble pouches, allow pouches to dissolve before agitation.

Ground-Driven Sprayer:

1. Use only spray tanks that have been cleaned prior to use.
 2. Add $\frac{1}{2}$ to $\frac{3}{4}$ the amount of required water to the spray tank.
- 3A. For PrimeraOne Quinclorac 75 DF alone:**
- Make a premix (1 part PrimeraOne Quinclorac 75 DF + 2 parts water) or slowly add PrimeraOne Quinclorac 75 DF to the partially filled tank.
 - Begin agitation until completely dispersed.
 - Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
 - Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.
- 3B. For PrimeraOne Quinclorac 75 DF and Wettable Powder Formulations (WP):**
- Slowly add the required amount of PrimeraOne Quinclorac 75 DF to the partially filled tank.
 - Begin agitation until completely dispersed.
 - Make a slurry of the WP (1 part WP + 2 parts water); then add to the spray tank and agitate.
 - Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
 - Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.
- 3C. For PrimeraOne Quinclorac 75 DF and Flowable Formulations (F):**
- Slowly add the required amount of PrimeraOne Quinclorac 75 DF to the partially filled tank.
 - Begin agitation until completely dispersed.
 - Make a slurry of the F formulation (1 part F + 2 parts water); then add to the spray tank and agitate.

- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

3D. For PrimeraOne Quinclorac 75 DF and Emulsifiable Concentrate Formulations (EC):

- Slowly add the required amount of PrimeraOne Quinclorac 75 DF to the partially filled tank.
- Begin agitation until completely dispersed.
- Make a premix of the EC (1 part EC + 2 parts water); then add to the spray tank and agitate.
- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

3E. For PrimeraOne Quinclorac 75 DF and Dry Flowable (Water-Dispersible Granule) Formulations (WDG):

- Slowly add the required amount of PrimeraOne Quinclorac 75 DF to the partially filled tank.
- Begin agitation until completely dispersed.
- Make a premix of the WDG (1 part WDG + 2 parts water); then add to the spray tank and agitate.
- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

Backpack Sprayer:

1. Use only spray tanks that have been cleaned from previous uses.
2. Add ½ the amount of required water to the spray tank.
3. Add the required amount of PrimeraOne Quinclorac 75 DF to the partially filled tank.
4. Replace the cap and agitate to completely mix the contents.
5. **Liquid Fertilizers:** Add the desired amount of fertilizer product.
6. Remove the cap and add the remaining amount of water to the tank. Replace the cap and agitate to ensure a uniform distribution.

7. During the spray operation, re-agitate the mixture occasionally to ensure that the product does not settle out. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

Liquid Fertilizers: When mixing with liquid fertilizers, perform a simple jar test with small quantities of tank mix components to ensure compatibility. Add the required amount of PrimeraOne Quinclorac 75 DF to a half-filled tank while agitating and then add the fertilizer product. Complete filling spray tank to desired level.

Compatibility Test for Tank Mixtures

Carry out this test using a one-quart jar. Add the ingredients in the order listed below. Calculate the amount to add to a one-quart jar using the following guidelines:

- For dry products applied at 1 lb per acre, add 2 teaspoons to a one-quart jar.
 - For liquid products applied at 1 pint per acre, add 1 teaspoon to a one-quart jar.
1. **Water:** For a spray volume of 20 gallons per acre, add 3.3 cups (800 mL) of water. Adjust the volume accordingly if other spray volumes are planned. Use water from the intended source at the source temperature.
 2. **Water-soluble packages:** Slit one of the bags just wide enough for a teaspoon to remove the sample. If compatible, use the opened bag first when preparing a tank mix solution. Boron-containing fertilizers can be incompatible with water-soluble bags. Include water-soluble bags if a boron fertilizer is intended to be used. Cap the jar and invert 10 times.
 3. **Water-Dispersible (WG) products** (such as dry flowables (DF) including PrimeraOne Quinclorac 75 DF, wettable powders (WP), suspension concentrates (SC), or suspoemulsions): Cap the jar and invert 10 times.
 4. **Water-soluble products** (such as Basagran® T/O herbicide): Cap the jar and invert 10 times.
 5. **Emulsifiable concentrates or methylated seed oil:** Cap the jar and invert 10 times.
 6. **Water-soluble additives:** Cap the jar and invert 10 times.

Let the test mixture stand for 15 minutes and then evaluate for uniformity and stability. If the mixture in the jar forms crystals, flakes, sludge, gels, oily films, or layers, the components are NOT compatible. WG or WP products may result in a fine precipitate that is easily resuspended which is normal; however, if large non-dispersible particles (>300 microns) precipitate on standing, this indicates that the tank mix is not compatible. **DO NOT** use any spray solution that could clog spray nozzles.

Spraying Instructions for PrimeraOne Quinclorac 75 DF

Make applications of PrimeraOne Quinclorac 75 DF with properly calibrated ground equipment. Apply in a minimum of 20 gallons of water per acre (or a minimum of 0.5 gallons per 1000 sq ft) at pressures between 20 and 40 psi to provide uniform spray distribution.

Make sure the spray tank is continuously agitated during the application. Use nozzle screens which are no finer than 50 mesh (100 mesh is finer than 50 mesh). The use of flat fan, flood, or cone nozzles is permitted, and arrange the nozzles to provide a thorough, uniform coverage of turfgrass and weeds. Adjust the boom height, nozzle selection, and pressure to provide uniform coverage and to minimize spray drift.

Check sprayer routinely to determine proper calibration.

Avoid overlaps as these lead to applying higher rates than allowed.

Do not apply if weather conditions favor drift from treated areas.

Spot Applications: Use 0.367 oz PrimeraOne Quinclorac 75 DF per 1000 sq ft of treated area for postemergence spot applications to susceptible weeds in tolerant turfgrass. Apply in at least 1 gallon spray mix per 1000 sq ft to ensure thorough, uniform spray coverage.

Apply PrimeraOne Quinclorac 75 DF to newly germinated 1-2 leaf crabgrass, to 1-tiller crabgrass, and when crabgrass has matured to 5 tillers or greater. In some situations, applications of PrimeraOne Quinclorac 75 DF made to annual grasses 2-4 tiller may not provide complete control. In such cases, apply PrimeraOne Quinclorac 75 DF as a sequential application for grass control.

Use the table below for use rates and mixing directions.

SPOT APPLICATIONS WITH PRIMERAONE QUINCLORAC 75 DF		
Spray Mix Volume (gallons)	Amount of PrimeraOne Quinclorac 75 DF Product in Tablespoons	Amount of MSO Adjuvant in Tablespoons
1	1	2
2	2	4
3	3	6

Spray Equipment Cleaning Procedure

Use a strong detergent or commercial sprayer cleaner according to the manufacturer's directions to clean the application equipment thoroughly before and after applying this product.

APPLICATION RATES

Refer to the **WEEDS CONTROLLED** table for the grasses and broadleaf weeds controlled by PrimeraOne Quinclorac 75 DF and for other weed-specific use directions.

Broadcast Applications:

- Apply 1 lb PrimeraOne Quinclorac 75 DF per acre (equivalent to 0.367 oz per 1000 sq ft or 0.75 lb ai/acre).

Spot Applications:

- Apply 0.367 oz of PrimeraOne Quinclorac 75 DF per 1000 sq ft of treated area. Refer to footnotes in the **WEEDS CONTROLLED** table and directions for application to creeping Bentgrass.

Additives:

- Apply 1.5 pints of methylated seed oil per acre (0.55 oz per 1000 sq ft) with PrimeraOne Quinclorac 75 DF applications.

Creeping Bentgrass:

- Make 2 to 3 split applications of PrimeraOne Quinclorac 75 DF at 0.123 to 0.245 oz per 1000 sq ft. Do not exceed 2 lbs of PrimeraOne Quinclorac 75 DF per acre per season (equivalent to 1.5 lb ai/A). The application(s) should be made at 21-day intervals.
- Include methylated seed oil at 0.55 oz per 1000 sq ft (1.5 pints per acre). To reduce yellowing on creeping bentgrass, add chelated iron or sprayable soluble nitrogen fertilizers (refer to the **ADJUVANTS** section). **DO NOT** use on golf course greens and collars. See additional information for creeping bentgrass under the section on **SEEDING, OVERSEEDING, AND SPRIGGING**.

WEEDS CONTROLLED

Grasses Controlled

Common Name (Scientific Name)

Barnyardgrass (*Echinochloa crusgalli*)
Crabgrass, Large (*Digitaria sanguinalis*)^{1,4}
Crabgrass, Smooth (*Digitaria ischaemum*)^{1,4}
Foxtail, Giant (*Setari faberi*)¹
Foxtail, Green (*Setari viridis*)¹
Foxtail, Yellow (*Setari glauca*)¹
Kikuyugrass (*Pennisetum clandestinum*)^{2,3}
Signalgrass, Broadleaf (*Brachiaria platyphylla*)¹
Torpedograss (*Panicum repens*)³

Broadleaf Weeds Controlled

Common Name (Scientific Name)

Bindweed, Field (*Convolvulus arvensis*)
Clover, Hop (*Trifolium aureum* Pollich)
Clover, Red (*Trifolium pretense*)
Clover, White (*Trifolium repens*)
Daisy, English (*Bellis perenne*)^{2,5}
Dandelion, Common (*Taraxacum officinale*)²
Dollarweed (*Hydrocotyle umbellate*)
Geranium, Carolina (*Geranium carolinium*)
Medic, Black (*Medicago lupuline*)
Morning glory spp. (*Ipomea* sp.)
Speedwell, Common (*Veronica officinalis*)
Speedwell, Slender (*Veronica filiformis*)
Speedwell, Thymeleaf (*Veronica serpyllifolia*)
Violet, Wild (*Viola* sp.)

¹ Complete control may not be achieved under certain conditions when PrimeraOne Quinclorac 75 DF is applied to annual grasses at 2 – 4 tiller stage. In these cases, make a sequential application for grass control. For best results, apply PrimeraOne Quinclorac 75 DF + methylated seed oil either before the second tiller stage or as the weed grasses mature.

² For these weeds, the use of a tank mix partner or sequential application will be required.

³ For these weeds, apply 0.245 oz of PrimeraOne Quinclorac 75 DF per 1000 sq ft as 3 sequential applications at 14 – 21 day intervals.

⁴ In California, some large and smooth crabgrass biotypes have shown varied responses to PrimeraOne Quinclorac 75 DF. If failure to control this weed occurs following a full or split application, **DO NOT** reapply PrimeraOne Quinclorac 75 DF. Instead, use a herbicide with a different mode of action.

⁵ **DO NOT USE** to control this weed in California.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry, and well-ventilated area. **DO NOT** store under wet conditions.

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

CONTAINER HANDLING:

Nonrefillable Container (flexible-bag-all weights): Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid-fifty lbs or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid-greater than fifty lbs): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable Container: Refillable container. Refill this container with quinclorac 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 mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES** and **LIMITATIONS OF LIABILITY**.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, 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 Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

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LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s. election, the replacement of product.

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