

83190-3

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Ms. Rebecca M. Horton  
Blue Water Chem Group  
P.O. Box 11384  
Fort Wayne, IN 46857

FEB 23 2010

Dear Ms. Horton:

Subject: Tsunami DQ  
Alternate #1 CSF (100% Repack) and Label Review  
EPA Registration No. 83190-3  
Submission Dated: November 9, 2009

The amendment referred to above, submitted in connection with registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended is acceptable, provided you make the following label modifications:

1. The order of the First Aid statements must be as follows:

- If on skin or clothing....
- If in eyes....
- In swallowed....
- In inhaled....

2. On page 5, modify the statement, immediately preceding "Spray Drift Management" as follows:

Replace "To avoid injury...thoroughly with water after use." with "Avoid spray drift to crops, ornamentals, and other desirable plants during application, as injury may result. Clean all spray equipment with water after use."

3. On page 11, under the heading "Aquatic and Noncrop Uses", replace ...control aquatic weeds in "public waters" with "water".

Revise "Do not apply to water that is moving...lakes and drainage ditches)." with "Do not apply to water that is moving or if outflow leads to other waters (i.e., apply only to still water ponds, lakes and drainage ditches).

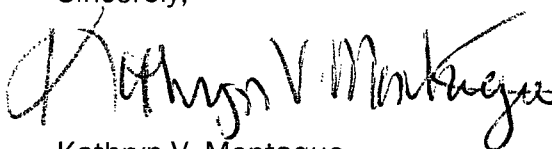
4. On page 11, under the heading "Precautions and Restrictions:" revise the second bullet as follows:

Aquatic applications of Tsunami DQ may only be made by those applicators certified...and by Corps of Engineers.

Alternate #1 CSF (dated 11/9/09) is acceptable and has been added to your record as current and updated.

A stamped copy of the label is enclosed for your records and this label supersedes all previously accepted labels.

Sincerely,



Kathryn V. Montaque  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505P)



<b>FIRST AID</b>	
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Pesticide Information Center at 800-858-7378 for emergency medical treatment information.</p>	
<b>NOTE TO PHYSICIAN</b>	
<p>To be effective, treatment for diquat poisoning must begin IMMEDIATELY. Treatment consists of binding diquat in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination, and removal of diquat from the blood by charcoal hemoperfusion or continuous hemodialysis.</p>	

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with eyes or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber  $\geq$  14 mils, and nitrile rubber  $\geq$  14 mils. If you want more options, follow the instructions for Category A on an EPA chemical-resistant category selection chart.

**Mixers, Loaders, Applicators and other handlers must wear:**

- Coveralls over short-sleeved shirt and short pants or coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading



### ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic invertebrates.

For Terrestrial Uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

For Aquatic Uses, do not apply directly to water except as specified on this label.

### DIRECTIONS FOR USE

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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

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 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants, or coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

**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.

Keep all unprotected persons out of operating areas or vicinity where there may be drift.

**For terrestrial uses**, do not enter or allow entry of maintenance workers into treated areas, or allow contact with treated vegetation wet with spray, dew, or rain, without appropriate protective clothing until spray has dried.

**For aquatic uses**, do not enter treated areas while treatments are in progress.

Tsunami DQ herbicide is used to control weeds in the following sites:

- aquatic areas
- commercial greenhouses and nurseries
- dormant established turfgrass (bermudagrass, zoysiagrass – nonfood or feed crop)
- landscape, industrial, recreational, commercial, residential, and public areas
- ornamental seed crops (flowers, bulbs, etc. – excluding the state of California)
- turf renovation (all turf areas except commercial sod farms)

Tsunami DQ works by being absorbed by the weed, and, within a few days, the weed shows signs of dying. Optimum results are seen if the weeds are young, actively growing, and free from stress.

To avoid injury to desired crops, ornamentals or desirable plants, use caution to prevent drift during application and clean all spray equipment thoroughly with water after use. Avoid application to muddy water or disturbing the water during application that may reduce weed control. To avoid reduced herbicidal activity, do not use dirty or muddy water in preparing spray solutions of Tsunami DQ. Avoid application under conditions of high wind, water flow, or wave action.

**SPRAY DRIFT MANAGEMENT**

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

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations:

- The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

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

**Pressure** – Do not exceed the nozzle manufacturer’s recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**BOOM LENGTH:** For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

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

**SWATH ADJUSTMENT:** When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the 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 droplets, 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 should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

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



**TEMPERATURE INVERSIONS:** Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, 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:** The pesticide should only be applied when the wind is blowing away from adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops).

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**AQUATIC AND NONCROP USES**

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**New York – Not for Sale or Use in New York State without Supplemental Special Local Needs Labeling.**

Tsunami DQ is used to control aquatic weeds in public waters such as ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams, rivers, and other slow-moving or quiescent bodies of water. Do not apply to water that is moving or if outflow leads to public waters (i.e., apply only to still water ponds, lakes and drainage ditches).

Optimum control of submersed weeds is obtained by applying Tsunami DQ when the weeds are actively growing (photosynthesizing), typically when water temperatures are about 50°F or more, (this occurs usually in the Spring or early Summer).

**Precautions and Restrictions:**

- Obtain all necessary approval and/or permits before application if required. Consult the responsible State Agencies (i.e., Fish and Game Agencies, State Water Conservation authorities, or Department of Natural Resources).
- Tsunami DQ may be applied by those applicators certified for aquatic pest control authorized by the State or Local government, Federal or State Public Agencies such as Water Management District personnel and municipal officials, and by Corps of Engineers.
- For water bodies containing dense weeds, apply Tsunami DQ to only 1/3 to 1/2 of the water body area at one time. If a repeat application is required, wait for 14 days. Using Tsunami DQ in this manner will prevent loss of oxygen in the water body which occurs when dead weeds begin to decompose which often leads to suffocation of fish.
- Do not apply Tsunami DQ in areas where commercial processing of fish which produces fish protein concentrate or fish meal is practiced. Prior to application, coordinate application with and obtain approval from local and/or State authorities.
- Use water treated with Tsunami DQ only after the specified number of days have passed after application (refer to the table below for these water use restrictions). Alternatively, the water may be used at a different time after application only if an approved assay (ex. PAM II Spectromatic Method) shows that no more than the designated maximum

contaminant level goal (MCLG) of 0.02 mg/L (ppm) of diquat dibromide (calculated as the cation) is present in the water.

- If posting is required by your state or tribe, consult the agency responsible for pesticide regulations for specific details.

**Water Use Restrictions Following Applications of Tsunami DQ**

TYPE OF WATER	Number of Days to Wait Before Using Water After An Application of Tsunami DQ At Different Application Rates				
	2 gals./ surface acre	1 gal./ surface acre	0.75 gal./ surface acre	0.50 gal./ surface acre	Spot Spray (<0.5 gal./ surface acre)†
Drinking	3 days	2 days	2 days	1 day	1 day
Fishing and Swimming	0	0	0	0	0
Livestock/Domestic Animals Consumption	1 day	1 day	1 day	1 day	1 day
Spray Tank Applications†† and Irrigation to Turf and Landscape Ornamentals	3 days	2 days	2 days	1 day	1 day
Spray Tank Applications†† and Irrigation to Food Crops and Production Ornamentals	5 days	5 days	5 days	5 days	5 days
† Apply Tsunami DQ in addition to the manufacturer's recommended rate of a nonionic surfactant (contains 75% or greater nonionic surfactant) †† Do not use water treated with Tsunami DQ to prepare sprays to be applied to food crops, turf or ornamentals until the appropriate time period has elapsed or injury to crop, turf or plants could occur. <b>Note:</b> If more than one spray tank is required to complete a single aquatic application, there is no water restriction between the consecutive spray tank applications.					

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[Optional Water Use Restrictions Chart reflecting reduced quantity equivalents to correspond with small packaging; e.g., 1 QT:

**Water Use Restrictions Following Applications of Tsunami DQ**

TYPE OF WATER	Number of Days to Wait Before Using Water After An Application of Tsunami DQ At Different Application Rates				
	1 QT 5,445 sq. ft./ surface area	1 QT/ 10,890 sq. ft. surface area	1 QT/ 14,375 sq. ft. surface area	1 QT/ 21,780 sq. ft. surface area	Spot Spray (<1 QT/ 21,780 sq. ft. surface area)†
Drinking	3 days	2 days	2 days	1 day	1 day
Fishing and Swimming	0	0	0	0	0
Livestock/Domestic Animals Consumption	1 day	1 day	1 day	1 day	1 day
Spray Tank Applications†† and Irrigation to Turf and Landscape Ornamentals	3 days	2 days	2 days	1 day	1 day
Spray Tank Applications†† and Irrigation to Food Crops and Production Ornamentals	5 days	5 days	5 days	5 days	5 days
† Apply Tsunami DQ in addition to the manufacturer's recommended rate of a nonionic surfactant (contains 75% or greater nonionic surfactant) †† Do not use water treated with Tsunami DQ to prepare sprays to be applied to food crops, turf or ornamentals until the appropriate time period has elapsed or injury to crop, turf or plants could occur. <b>Note:</b> If more than one spray tank is required to complete a single aquatic application, there is no water restriction between the consecutive spray tank applications.					

**Control of Floating and Marginal Weeds**

Tsunami DQ controls the listed floating and marginal weeds from application by airboat, airplane, backpack, spray handgun, helicopter, or similar application equipment. For all application methods, ensure that weeds received thorough spray coverage.

<b>Floating and Marginal Weeds Controlled</b>
Water lettuce, <i>Pistia stratiotes</i>
Water hyacinth, <i>Eichhornia crassipes</i>
Duckweed, <i>Lemna</i> spp.
Salvinia spp. (including <i>S. molesta</i> )
Pennywort ( <i>Hydrocotyle</i> spp.)
Frog's Bit, <i>Limnobium spongia</i> †
Cattails, <i>Typha</i> spp.

† Not registered for use in California

**Spot Treatment:**

**Application Rates:** 2 quarts Tsunami DQ per 100 gallons spray carrier [1 QT per 50 gallons spray carrier] (0.5% solution) *plus* 0.25-1.0% v/v (1 quart to 1 gallon per 100 gallons water) of an approved aquatic wetting agent.

**For cattail control:** Apply Tsunami DQ before flowering at 8 quarts of Tsunami DQ/100 gallons spray carrier [1 QT per 12.5 gallons spray carrier] (the maximum application rate) plus the wetting agent. Make repeat applications if needed for complete control.

**Application Directions:** Apply spray solutions to wet completely the target weeds. Do not spray to runoff. Additional applications may be needed if treating densely-packed weeds or mats. Best results are obtained for weed escapes if repeat applications are made within 2 weeks of the first treatment.

**Broadcast Treatment:**

**Application Rates:** 0.5 to 2.0 gallons Tsunami DQ per surface acre [1 to 4 quarts per 21,780 sq. ft. surface area] in sufficient spray carrier *plus* 16 to 32 oz. per acre [8 to 16 oz. per 21,780 sq. ft. surface area] of an approved aquatic wetting agent.

**For duckweed control:** Apply Tsunami DQ at 1-2 gallons/A [1 to 2 quarts per 10,980 sq. ft. surface area].

**Application Directions:** Apply sprays to ensure thorough target weed coverage. Repeat applications may be necessary for densely populated weed areas.

**Control of Submerged Weeds**

Tsunami DQ controls the listed submerged weeds from application by surface, subsurface, and bottom placement applications. Enhanced weed control may be obtained in situations where severe weed or algae infestations are found: use an approved algaecide either as a pretreatment to a Tsunami DQ application, or as a tank mix with Tsunami DQ.

Submersed Weeds Controlled or Suppressed
Bladderwort, <i>Utricularia</i> spp.
Hydrilla, <i>Hydrilla verticillata</i>
Watermilfoils (including Eurasian), <i>Myriophyllum</i> spp.
Pondweeds, <i>Potamogeton</i> spp. †
Coontail, <i>Ceratophyllum demersum</i>
Elodea, <i>Elodea</i> spp.
Brazilian Elodea, <i>Egeria densa</i>
Naiad, <i>Najas</i> spp.
Algae, <i>Spirogyra</i> spp. and <i>Pithophora</i> spp. ††

† Tsunami DQ does not control Richardson's pondweed, *P. richardsonii*.

†† Suppression only. *Spirogyra* and/or *Pithophora*, can be controlled using a tank mix of Tsunami DQ with an approved algaecide.

**Application Rates:** 0.5-2.0 gallons Tsunami DQ in water per surface acre [1 to 4 quarts per 21,780 sq. ft. surface area] (per 4-foot water depth). For severe weed infestations, use the 2.0 gallon per surface acre [higher] rate. Repeat applications at 14 to 21 day intervals may be needed for optimum control.

Use the table below to determine the number of gallons of Tsunami DQ needed to apply per surface acre based on water depth.

	Gallons of Tsunami DQ per Surface Acre			
	Average Water Depth			
	1 Foot	2 Feet	3 Feet	4 Feet
1 gallon/acre rate	0.25 gal.	0.50 gal.	0.75 gal.	1.0 gal.
2 gallon/acre rate	0.50 gal.	1.0 gal.	1.5 gals.	2.0 gals.

Note: For water depths of 2 feet or less including shorelines, do not exceed 1 gallon per surface acre.

[Optional Rate Chart reflecting reduced quantity equivalents to correspond with small packaging; e.g., 1 QT:

	Quarts of Tsunami DQ per 10,890 Sq. Ft. of Surface Area			
	Average Water Depth			
	1 Foot	2 Feet	3 Feet	4 Feet
1QT/10,890 sq. ft. surface area	0.25 QT	0.50 QT	0.75 QT	1 QT
2 QTS/10,890 sq. ft. surface area	0.50 QT	1 QT	1.5 QT	2 QT

Note: For water depths of 2 feet or less including shorelines, do not exceed 1 QT per 10,890 sq. ft. of surface area.

**Application Directions**

**Subsurface Applications:** For submersed weeds, especially *Hydrilla*, that have reached the water's surface, apply Tsunami DQ in a water carrier or an invert emulsion through boom trailing hoses carrying nozzle tips that direct the dilute spray below the water surface to ensure adequate weed coverage.

**Bottom Placement:** For submersed weeds (ex. *Hydrilla*, Bladderwort, or Coontail) that have reached the water surface and/or where the water is slowly moving through the weed growth, apply Tsunami DQ in an invert emulsion carrier with weighted hoses that injects the diluted spray solution near the bottom. Adding a copper-based algaecide may improve control. Alternatively, a pretreatment application with a copper based algaecide may improve overall control if algae are present along with submersed weeds.

**Surface Application for Submersed Aquatic Weeds:** For submerged weeds, apply Tsunami DQ as a spray in sufficient carrier to fully cover the target area and to ensure complete coverage of the weed areas. The higher rate is recommended for mixed weed populations. Surface spray applications are not recommended for densely-packed submersed weeds or if water is over 2 feet deep (use subsurface applications of Tsunami DQ in these situations).

**COMMERCIAL GREENHOUSES AND NURSERIES**

Tsunami DQ may be used for general weed control in commercial greenhouses (ex., beneath benches), for field grown and container stock, and in other similar areas. Make applications of Tsunami DQ preplant or postplant preemergence in field grown ornamental nursery plantings, or postemergence as a directed spray. For ornamental seed crops (NOT registered for use in the State of California), Tsunami DQ may also be applied preemergence. Do not allow sprays to contact desirable foliage or injury may occur. Do not use on food or feed crops.

**Spot Spray Application Rates:** 1-2 qts. Tsunami DQ *plus* a nonionic surfactant (contains 75% or greater nonionic surfactant) at the manufacturer's recommended rate per 100 gals of water, or 0.75 oz. (22 ml) Tsunami DQ plus the manufacturer's recommended rate of a nonionic surfactant (contains 75% or greater nonionic surfactant) per 1 gallon of water.

**Broadcast Application Rates:** 1-2 pts. Tsunami DQ in a minimum of 15 gallons of water per acre *plus* a nonionic surfactant (contains 75% or greater nonionic surfactant) at the manufacturer's recommended rate per 100 gals of spray mixture. For thorough coverage, apply Tsunami DQ in an adequate spray volume.

**DORMANT ESTABLISHED TURFGRASS (BERMUDAGRASS, ZOYSIAGRASS)  
NONFOOD OR FEED CROP**

Tsunami DQ controls the listed emerged annual broadleaf and grass weeds in established dormant bermudagrass lawns, parks, golf courses, etc. Do not apply unless turfgrass is dormant at application. Application to actively growing bermudagrass may cause delay or permanent injury. If using this product in extreme Southern areas of the U.S., make certain that the turfgrass is dormant at the time of application.

<b>Weeds Controlled in Established Dormant Turfgrass</b>
Little Barley†
Annual Bluegrass
Bromes including Rescuegrass, Sixweeks fescue, Henbit, Buttercup, and Carolina Geranium

†Apply Tsunami DQ before the mid-boot stage.

**Broadcast (Ground) Application Rates:** 1-2 pts. Tsunami DQ per acre in 20-100 gals. of spray mix *plus* a nonionic surfactant (contains 75% or greater nonionic surfactant) at the manufacturer's recommended rate per 100 gals. of spray mixture.

**LANDSCAPE, INDUSTRIAL, RECREATIONAL, COMMERCIAL, RESIDENTIAL, AND PUBLIC AREAS**

Tsunami DQ is a nonselective herbicide and it will kill broadleaf and grassy weeds in industrial, recreational, golf course, commercial, residential, and public areas within 24-36 hours. Do not allow sprays to contact desirable plant foliage or injury may occur.

To be effective as a contact/desiccant herbicide, Tsunami DQ must completely cover the target weeds. Best results are seen when Tsunami DQ is applied to young, actively growing weeds. Do not apply to weeds that are growing under stress. Use the recommended application techniques for acceptable weed control.

For weeds that are difficult to control, such as perennial, or deeply-rooted weeds, control is often obtained by applications of Tsunami DQ as a tank mix with other systemic-type herbicides. Tsunami DQ, when applied as a tank-mix with a preemergent herbicide labeled for the intended use site, will provide residual control. Before preparing large volume of a tank-mix of Tsunami DQ with other herbicides, check that the tank-mix is physically compatible by mixing only a small amount of the tank mix. If the mixture balls up, forms flakes, sludges, jells, oily films or layers, or other precipitates, do not use this combination: it is not compatible. Read and follow the other product labels for specific application directions.

It is not possible for Blue Water Chem Group to test all possible tank mixtures of Tsunami DQ with other pesticides for compatibility, efficacy, or other adverse effects. Blue Water Chem Group recommends you consult your state experimental station, state university or extension agent before tank-mixing Tsunami DQ with other herbicides.

**Grounds maintenance weed control in public, commercial and residential landscapes, including landscape beds, lawns, golf courses and roadsides:** Apply Tsunami DQ as a spot or broadcast spray to control weeds in listed sites or to control weeds around the edges and nonflooded portions of ponds, lakes and ditches.

**Trim and Edge weed control along driveways, walkways, patios, cart paths, fence lines, and around trees, ornamental gardens, buildings, other structures, and beneath noncommercial greenhouse benches :** Tsunami DQ can be used to eliminate undesired grass and broadleaf plant growth in a narrow-banded areas along the areas listed.

Since Tsunami DQ does not translocate systemically, it can be used as an edging or pruning tool. Tsunami DQ must be applied only to the select, narrow-banded areas of grass or undesirable weed growth found in desirable ornamental bedding plants, ground covers, etc. Tsunami DQ will only control vegetation growing within the width of the spray application. Do not exceed the labeled rate of Tsunami DQ or concrete-based materials will be stained.

**Industrial weed control for right-of-ways, railroad beds/yards, highways, roads, dividers and medians, parking lots, pipelines, pumping stations, public utility lines, transformer stations and substations, electric utilities, storage yards, and other non-crop areas:** Apply Tsunami DQ as a spot or broadcast spray either alone or in combination with other herbicides for a fast burndown of weeds in listed industrial weed control sites.

**Spot Spray Applications:** 1-2 qts. of Tsunami DQ *plus* a nonionic surfactant (contains 75% or greater nonionic surfactant) at the manufacturer's recommended rate per 100 gals. water. For small spray solution volumes, mix 0.75 oz. (22 ml) Tsunami DQ with the appropriate amount of the nonionic surfactant in 1 gallon of water.

**Broadcast Applications:** 1-2 pts. Tsunami DQ per acre *plus* a nonionic surfactant (contains 75% or greater nonionic surfactant) at the manufacturer's recommended rate per 100 gals. of spray mixture. Use sufficient water to ensure good spray coverage, although increased spray volumes (60 gals. or more are recommended) will be necessary for treating tall and/or dense target plants.

**ORNAMENTAL SEED CROPS (FLOWERS, BULBS, ETC.)  
(NOT REGISTERED FOR USE IN THE STATE OF CALIFORNIA)**

Tsunami DQ can be used for preharvest desiccation of ornamental seed crops. DO NOT USE FOR FOOD OR FIBER CROPS.

**Broadcast (Air or Ground) Applications:** 1.5-2 pts. Tsunami DQ *plus* a nonionic surfactant (contains 75% or greater nonionic surfactant) at the manufacturer's recommended rate per acre. Apply in sufficient amount of water (minimum of 5 gallons by air; 15 gallons by ground) to ensure desiccation and weed burndown. Make repeat applications at a minimum of 5-day intervals and do not apply more than three applications. Do not use seed, screenings, or waste as feed or for consumption.

**TURF RENOVATION  
(ALL TURF AREAS EXCEPT COMMERCIAL SOD FARMS)**

Tsunami DQ is used to desiccate golf course turf and other turf areas prior to renovation. For suppression of regrowth and quick desiccation of treated turfgrass, use Tsunami DQ as a tank mix with other systemic nonselective or systemic postemergence grassy weed herbicides. Before tank mixing with other products, read and follow the other product labels for specific application directions and restrictions.

**Broadcast (Ground) Application:** 1-2 pts. of Tsunami DQ per acre *plus* a nonionic surfactant (contains 75% or greater nonionic surfactant) at the manufacturer's recommended rate in 20-100 gals. of water. For smaller spray solution volumes, mix 4 teaspoons of Tsunami DQ and the appropriate amount of nonionic surfactant in 1 gal. of water. Apply Tsunami DQ as a full coverage spray to thoroughly contact the turfgrass. Make applications only when the turf is dry, free from dew or other moisture. Increased water volumes (100 gal. of water per acre) will enhance turf desiccation, especially when turfgrass is dense and thick.

Do not allow sprays to come in contact with or drift to, foliage of ornamental plants or food crops.

Do not graze livestock on treated turf or feed treated thatch to livestock.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Do not contaminate feed, foodstuffs, or drinking water. Do not store or transport near feed or food. Store at temperatures above 32°F.

**PESTICIDE DISPOSAL:** Open dumping is prohibited. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. 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 and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!**

**CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. 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 manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Blue Water Chem Group or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Blue Water Chem Group and Seller harmless for any claims relating to such factors.

Blue Water Chem Group warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with the Directions for Use. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or Blue Water Chem Group, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BLUE WATER CHEM GROUP MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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