DIQUAT DIBROMIDE | GROUP 22 | HERBICIDE

Tsunami DQ®

Landscape and Aquatic Herbicide

Intended for Commercial Use

To prevent accidental poisoning, never put this product in food, drink, or unlabeled containers. Use this product strictly in accordance with the directions on this label.

Active Ingredient:

Diquat dibromide[6,7- dihydrodipyrido(1,2-*a*:2′,1′-*c*) pyrazinediium dibromide] CAS #85-00-7).....37.3%

Other Ingredients:.....62.7%

Total:.....100.0%

Contains 2 lbs. diquat cation per gallon (3.73 lbs. of diquat dibromide per gallon).

EPA Reg. No. 83190-3-72838 EPA Est. No.72838-IN-003

KEEP OUT OF REACH OF CHILDREN

CAUTION

See booklet for additional Precautionary Statements and First Aid

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Net Contents: 1QT (946.3ml)

Distributed by: Sanco Industries, Inc.
P.O. Box 11617 Fort Wayne, IN 46859 USA

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.

Human flagging is prohibited.

Respirator fit testing, medical qualification, and training

Using a program that conforms to OSHA's requirements (see 29 CFR Part 1910.134), employers must verify that any handler who uses a respirator is:

- Fit-tested and fit-checked,
- Trained, and
- Examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn. A qualified medical practitioner is a physician or other licensed health care professional who will evaluate the ability of a worker to wear a respirator. The initial evaluation consists of a questionnaire that asks about medical conditions (such as a heart condition) that would be problematic for respirator use. If concerns are identified, then additional evaluations, such as a physical exam, might be necessary. The initial evaluation must be done before respirator use begins. Handlers must be reexamined by a qualified medical practitioner if their health status or respirator style or use-conditions change.

Upon request by local/state/federal/tribal enforcement personnel, employers must provide documentation demonstrating how they have complied with these requirements.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are barrier laminate, butyl rubber ≥ 14 mils, and nitrile rubber ≥ 14 mils.

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
- Face shield when mixing or loading

Exception: After this product has been diluted to 0.50% Tsunami DQ or less in water (i.e. – the labeled rate for some spot applications), applicators for AQUATIC SURFACE APPLICATIONS must at a minimum wear (Note – Mixers and Loaders for this application method must still wear the personal protective equipment (PPE) as described in the above section)

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves
- Protective eyewear

Exception: At a minimum, applicators for AQUATIC SUBSURFACE APPLICATIONS must wear (Note – Mixers and Loaders for this application must still wear the personal protective equipment (PPE) as described in the above section)

- Long-sleeved shirt and long pants
- Chemical resistant gloves
- Chemical resistant footwear plus socks

In addition, handlers supporting applications to aquatic areas for the control of submersed weeds via trailing or submersed hoses, during the time in which they are mixing and/or loading the diquat-containing material, must wear:

- a minimum of a NIOSH-approved particulate filtering facepiece respiration with any N, R or P filter; OR
- a NIOSH-approved elastomeric particulate respirator with any N, R or P filter; OR
- a NIOSH-approved powered air purifying respirator with HE filters

Alternatively, such mixer/loaders may use closed mixing/loading systems without a respirator. A closed system is one which removes the pesticide from its original container and transfers the pesticide product thorough connecting hoses, pipes and couplings that are sufficiently tight to prevent exposure

of handlers to the pesticide product, except for the negligible escape associated with normal operation of the system (40 CFR § 170.607(d)).

In addition, mixer/loader applicators using mechanically pressurized handguns on soil or ground-directed sprays on nonfood or feed crop industrial, commercial and public areas (including recreational areas, golf courses, parks, turf and lawns, must wear:

- a minimum of a NIOSH-approved particulate filtering facepiece respiration with any N, R or P filter; OR
- a NIOSH-approved elastomeric particulate respirator with any N, R or P filter; OR
- a NIOSH-approved powered air purifying respirator with HE filters

In addition, 1) mixer/loaders supporting applications to aquatic areas with mechanically-pressurized handguns AND 2) mixer/loader/applicators using mechanically-pressurized handguns to treat aquatic areas, during mixing and loading operations ONLY, must wear:

- a minimum of a NIOSH-approved particulate filtering facepiece respiration with any N, R or P filter; OR
- a NIOSH-approved elastomeric particulate respirator with any N, R or P filter; OR
- a NIOSH-approved powered air purifying respirator with HE filters

Alternatively, these aquatic handlers may use closed mixing/loading systems without a respirator.

In addition, applicators using groundboom equipment for all crop uses must wear:

- a minimum of a NIOSH-approved particulate filtering facepiece respiration with any N, R or P filter; OR
- a NIOSH-approved elastomeric particulate respirator with any N, R or P filter; OR
- a NIOSH-approved powered air purifying respirator with HE filters

In addition, mixer/loader/applicators using backpack sprayers for treatments to rights-of-way (e.g. utilities, railroads and roadways), and landscaping and turf sites (e.g., lawns, athletic fields and parks) must wear:

- a minimum of a NIOSH-approved particulate filtering facepiece respiration with any N, R or P filter; OR
- a NIOSH-approved elastomeric particulate respirator with any N, R or P filter; OR
- a NIOSH-approved powered air purifying respirator with HE filters

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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

Mixer/loaders supporting all aerial applications must use closed mixing/loading systems that meet the requirements listed in the WPS for agricultural pesticides [40 CFR 170.607(d)(2)(i) & (ii)] for inhalation protection.

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

USER SAFETY RECOMMENDATIONS

Users should:

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

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 habit of non-target organisms by following label directions intended to minimize spray drift.

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.

WEED RESISTANCE MANAGEMENT:

For resistance management, Tsunami DQ is a Group 22 herbicide. Any weed population may contain or develop plants naturally resistant to Tsunami DQ and other Group 22 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed. To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of Tsunami DQ or other Group 22 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 the less 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 currently 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, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates,; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after 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 a mechanical method such as hoeing 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.00

- If weed pest 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 advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Sanco Industries, Inc. at www.sancoind.com

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
- 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. Avoid spray drift to crops, ornamentals, and other desirable plants during application, as injury may result. Clean all spray equipment 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.

MANDATORY SPRAY DRIFT

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 use a medium or coarser droplet size (ASABE S572.1)
- Do not apply when wind speeds 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.
- 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 during temperature inversions.

Groundboom 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 use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour 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.

Boomless Ground Applications:
Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:
Take precautions to minimize spray drift.

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 manufacturers' recommendations for setting up nozzles. Generally, to reduce find droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Groundboom

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

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for 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 generally 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.

AQUATIC AND NONCROP USES

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 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 other 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).
- Aquatic applications of Tsunami DQ may only be made 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.

- 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.
- The use of a vehicle-mounted boom sprayer to apply this product above the water surface for treatment of floating, emergent, or marginal vegetation, except for applications made via aircraft, is prohibited. This prohibition does not apply to applications made below the water surface via submersed or trailing hoses.
- Do not apply this product on cattails (*Typha* spp.) as a target weed species.
- Do not apply this product at a rate greater than 2.5 lb ai/surface-acre per application for the control of floating, emergent, or marginal vegetation. Do not apply this product at a rate greater than 1 lb qi/acre-foot per application for the control of submersed weeds.
- Waters treated with this product may be hazardous to non-target aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead biomass. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not use products containing diquat dibromide to treat more than ½ of the water body (excluding water infrastructure and constructed conveyances such as drainage canals, ditches and pipelines or intakes and aqueducts for drinking water or irrigation use) to avoid depletion of oxygen due to decaying vegetation. Wait at least 7 days between diquat dibromide applications to adjacent treatment areas within the same waterbody. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas. Consult with the state or local agency with primary responsibility for regulating pesticides before applying this product to public waters to determine if a permit is required.

Water Use Restrictions Following Applications of Tsunami DQ

	Number of Days to Wait Before Using Water After An Application of Tsunami DQ At Different Application Rates				
TYPE OF WATER	**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.

Note: 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.

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

† 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.

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, *Utricularia* spp.
Hydrilla, *Hydrilla verticillata*
Watermilfoils (including Eurasian), *Myriophyllum* spp.
Pondweeds, *Potamogeton* spp.†
Coontail, *Ceratophyllum demersum*
Elodea, *Elodea* spp.
Brazilian Elodea, *Egeria densa*
Naiad, *Najas* spp.
Algae, *Spirogyra* spp. and *Pithophora* spp. ††

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

†† Suppression only. *Spirogyra* and/or *Pithophor*a, 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.

	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

The use of mechanically-pressurized handguns to apply this product in greenhouses is prohibited.

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.

Weeds Controlled in Established Dormant Turfgrass
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 Sanco Industries, Inc. to test all possible tank mixtures of Tsunami DQ with other pesticides for compatibility, efficacy, or other adverse effects. Sanco Industries, Inc. 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.

Do not apply products containing diquat dibromide to production ornamentals at a rate more than 1 lb ai/A/year. ,Do not apply products containing diquat dibromide more than four times per year.

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. Triple rinse all containers prior to disposal and then offer for recycling, if available, or puncture and dispose of in an approved manner, or dispose by incineration if allowed by local and state authorities. If disposal is by incineration, stay out of smoke. 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.

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 Sanco Industries, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to Sanco Industries, Inc. and Seller harmless for any claims relating to such factors.

Sanco Industries, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with the Directions for Use. 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 Sanco Industries, Inc., and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SANCO INDUSTRIES, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither Sanco Industries, Inc. nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SANCO INDUSTRIES, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SANCO INDUSTRIES, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT**.

Sanco Industries, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Sanco Industries, Inc.

Tsunami DQ contains diquat dibromide, the active ingredient used in Reglone® and Reward®.
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