



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

June 29, 2026

Ed Hearn
Agent for Sharda USA, LLC
SynTech Regulatory
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Hockessin, DE 19707
edward.hearn@syntechresearch.com

Subject: Label Amendment - Registration Review Mitigation for Diquat Dibromide
Product Name: Sharda Diquat Dibromide 37.3% SL
EPA Registration Number: 83529-12
Case Number: 475189
Application Dates: June 2, 2020

Dear Ed Hearn:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Diquat Dibromide Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must

submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Meaghan Robertson by phone at (202) 566-1069, or via email at robertson.meaghan@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Cathryn Britton". The signature is fluid and cursive, with the first name "Cathryn" and last name "Britton" clearly distinguishable.

Cathryn Britton
Chief, Risk Management and Implementation
Branch V
Pesticide Re-evaluation Division (7508M)
Office of Pesticide Programs

ENCLOSURE: Stamped label

ACCEPTED

06/29/2026

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No.

83529-12

SHARDA DIQUAT DIBROMIDE 37.3% SL Booklet

83529-12.20200602.V6

Interim Decision Revisions

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DIQUAT DIBROMIDE	GROUP	22	HERBICIDE
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SHARDA DIQUAT DIBROMIDE 37.3 SL

ABN: Dessicash L&A

Landscape and Aquatic Herbicide

TO PREVENT ACCIDENTAL POISONING, NEVER STORE THIS PRODUCT IN FOOD,

DRINK, OR UNLABELED CONTAINERS.

INTENDED FOR COMMERCIAL USE

DO NOT USE THIS PRODUCT FOR REFORMULATION.

Active Ingredient:

Diquat dibromide [6,7-dihydrodipyrido (1,2-a:2',1'-c)
pyrazinedium dibromide].....

37.3%

Other

62.7%

Ingredients:

Total:

100.0%

Contains 2 lbs. diquat cation per gal. (3.73 lbs. diquat dibromide per gal.)

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
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 IN EYES	• IMMEDIATELY hold eye open and rinse thoroughly 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 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 to an unconscious person.
IF INHALED	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIANS 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 hemoper-fusion or continuous hemodia lysis. If in eyes, treat symptomatically. Symptoms develop gradually. Sever damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should be continued until healing is complete.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call (303) 623-5716 (Rocky Mountain Poison Control Center). For Transportation Emergencies: Call ChemTrec at (800) 424-9300.	

[Optional referral statements when booklets and container labels are used:

See Panel for First Aid Instructions and booklet for complete Precautionary Statements and Directions for Use.

See label booklet for complete Precautionary Statements, Directions For Use, and Storage and Disposal.

See label booklet for additional Precautionary Statements Directions For Use, and Storage and Disposal.

See label booklet for complete Directions For Use.]

EPA Reg. No. 83529-12

EPA Estab. No.: XXX

Manufactured for:
Sharda USA LLC
Hockessin, Delaware

Net Contents: ____ [Gals][Liters]

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation. Causes skin 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)

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, such as barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride ≥14 mils, and Viton ≥14 mils.
- Chemical-resistant footwear plus socks
- Protective eyewear (e.g., safety glasses or face shield)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading
- Face shield when mixing or loading

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 respirator 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 through 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 industrial and commercial areas must wear:

- a minimum of a NIOSH-approved particulate filtering facepiece respirator 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 respirator 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 respirator 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 respirator 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.

Exception: After this product has been diluted to 0.50% SHARDA DIQUAT DIBROMIDE 37.3% SL™ 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
- Waterproof gloves
- Protective eyewear

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

- Short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks

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. Prolonged contact of the product with the skin may produce burns.
- 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

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

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 wash water. For Aquatic Uses do not apply directly to water except as specified on this label. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

CONDITIONS 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. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop con-

ditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SHARDA USA LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SHARDA USA LLC and Seller harmless for any claims relating to such factors.

SHARDA USA LLC 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 directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SHARDA USA LLC, and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, SHARDA USA LLC 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, in no event shall SHARDA USA LLC or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SHARDA USA LLC 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 SHARDA USA LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SHARDA USA LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of Sale and Limitations of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SHARDA USA LLC.

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 such as barrier laminate, butyl rubber, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride ≥14 mils, and Viton ≥14 mils.
- Chemical-resistant footwear plus socks
- Protective eyewear (e.g., safety glasses or face shield)
- 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.

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. For help with any spill, leak, fire, or exposure involving this material, call CHEMTREC at (800) 424-9300.

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

Non refillable container. Do not refill or reuse container. 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. 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.

For Bulk And Mini-Bulk Containers

REFILLABLE CONTAINER. REFILL THIS CONTAINER WITH PESTICIDE ONLY. DO NOT REUSE THE 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.

Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. To clean 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.

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

[See Booklet for Complete Directions for Use]

WEED RESISTANCE MANAGEMENT

For resistance management, SHARDA DIQUAT DIBROMIDE 37.3% SL is a Group 22 herbicide. Any weed population may contain or develop plants naturally resistant to SHARDA DIQUAT DIBROMIDE 37.3% SL 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 SHARDA DIQUAT DIBROMIDE 37.3% SL 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.

- If a 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.
- Report lack of performance to Sharda USA LLC or their representative.

SPECIFIC USE DIRECTIONS

SHARDA DIQUAT DIBROMIDE 37.3% SL is a nonvolatile herbicidal chemical for use as a general herbicide to control weeds in commercial greenhouses and nurseries; ornamental seed crops (flowers, bulbs, etc. - except in the state of California); landscape, industrial, recreational, commercial, residential, and public areas; turf renovation (all turf areas except commercial sod farms); dormant established turfgrass (bermudagrass, zoysiagrass - nonfood or feed crop); and aquatic areas. Absorption and herbicidal action is usually quite rapid with effects visible in a few days. SHARDA DIQUAT DIBROMIDE 37.3% SL controls weeds by interfering with photosynthesis within green plant tissue. Weed plants should be succulent and actively growing for best results. Rinse all spray equipment thoroughly with water after use. Avoid spray drift to crops, ornamentals, and other desirable plants during application, as injury may result. Application to muddy water may result in reduced control. Minimize creating muddy water during application. Use of dirty or muddy water for SHARDA DIQUAT DIBROMIDE 37.3% SL dilution may result in reduced herbicidal activity. Avoid applying 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

Boom-less 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.

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS

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 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 should be observed.

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 inversions**).

Controlling Droplet Size – Groundboom

- 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 fine 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 spray drift.

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential 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.

COMMERCIAL GREENHOUSES AND NURSERIES

For general weed control in commercial greenhouses (beneath benches), field grown and container stock, and other similar areas, SHARDA DIQUAT DIBROMIDE 37.3% SL may be applied preplant or post-plant pre-emergence in field grown ornamental nursery plantings or post-emergence as a directed spray. SHARDA DIQUAT DIBROMIDE 37.3% SL may also be applied pre-emergence in ornamental seed crops (except in the state of California). Avoid contact with desirable foliage as injury may occur.

Restrictions

- Do not use on food or feed crops.
- The use of mechanically-pressurized handguns to apply this product in greenhouses is prohibited.

Spot spray: 1-2 qts. SHARDA DIQUAT DIBROMIDE 37.3% SL plus the labeled rate of a 75% or greater nonionic surfactant per 100 gals. of water, or 0.75 oz. (22 mls.) SHARDA DIQUAT DIBROMIDE 37.3% SL plus the labeled rate of a 75% or greater nonionic surfactant per 1 gal. of water.

Broadcast: 1-2 pts. SHARDA DIQUAT DIBROMIDE 37.3% SL in a minimum of 15 gals. of water per acre. Add the labeled rate of a 75% or greater nonionic surfactant per 100 gals. of spray mixture. Use an adequate spray volume to insure good coverage.

ORNAMENTAL SEED CROPS (FLOWERS, BULBS, ETC.) EXCEPT IN THE STATE OF CALIFORNIA

For preharvest desiccation of ornamental seed crops. NOT FOR FOOD OR FIBER CROPS.

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

Broadcast (Air or Ground): 1.5-2 pts. SHARDA DIQUAT DIBROMIDE 37.3% SL plus the labeled rate of a 75% or greater nonionic surfactant per acre in sufficient water (minimum of 5 gals, by air; 15 gals, by ground) for desiccation and weed burndown. Repeat as needed at no less than 5-day intervals up to three applications. Do not use seed, screenings, or waste as feed or for consumption.

DIRECTIONS FOR LANDSCAPE, INDUSTRIAL, RECREATIONAL, COMMERCIAL, RESIDENTIAL, AND PUBLIC AREAS

SHARDA DIQUAT DIBROMIDE 37.3% SL provides fast control of broadleaf and grassy weeds in industrial, recreational, golf course, commercial, residential, and public areas.

SHARDA DIQUAT DIBROMIDE 37.3% SL is a nonselective herbicide that rapidly kills undesirable above ground weed growth in 24-36 hours. Avoid application of SHARDA DIQUAT DIBROMIDE 37.3% SL to desirable plants.

SHARDA DIQUAT DIBROMIDE 37.3% SL is a contact/desiccant herbicide; it is essential to obtain complete coverage of the target weeds to get good control. Improper application technique and/or application to stressed weeds may result in unacceptable weed control. For best results, apply to actively growing, young weeds.

Difficult weeds (such as perennial or deeply-rooted weeds) can often be controlled by tank mixing SHARDA DIQUAT DIBROMIDE 37.3% SL with other systemic-type herbicides. Refer to other product labels for specific application directions.

For residual weed control, tank mix SHARDA DIQUAT DIBROMIDE 37.3% SL with a pre-emergent herbicide labeled for the intended use site. When mixing SHARDA DIQUAT DIBROMIDE 37.3% SL with another herbicide, it is recommended to mix just a small amount first to determine if the mixture is physically compatible before proceeding with larger volumes.

Sharda USA LLC has not tested all possible tank mixtures with other herbicides for compatibility, efficacy or other adverse effects. Before mixing with other herbicides Sharda recommends you first consult your state experimental station, state university or extension agent.

Grounds maintenance weed control: SHARDA DIQUAT DIBROMIDE 37.3% SL can be used as a spot or broadcast spray to control weeds in public, commercial and residential landscapes, including landscape beds, lawns, golf courses and roadsides. SHARDA DIQUAT DIBROMIDE 37.3% SL can also be used for weed control around the edges and non-flooded portions of ponds, lakes and ditches.

Trim and Edge weed control: SHARDA DIQUAT DIBROMIDE 37.3% SL can be used to eliminate undesired grass and broadleaf plant growth in a narrow band along driveways, walkways, patios, cart paths, fence lines, and around trees, ornamental gardens, buildings, other structures, and beneath noncommercial greenhouse benches. Vegetation control with SHARDA DIQUAT DIBROMIDE 37.3% SL is limited to the spray application width. Do not exceed the labeled rate of SHARDA DIQUAT DIBROMIDE 37.3% SL as excessive rates may result in staining of concrete-based materials.

SHARDA DIQUAT DIBROMIDE 37.3% SL, since it does not translocate systemically, can be used as an edging or pruning tool when precisely applied to select areas of grass or to undesirable growth on desirable ornamental bedding plants, ground covers, etc.

Industrial weed control: SHARDA DIQUAT DIBROMIDE 37.3% SL can be used as a spot or broadcast spray either alone or in combination with other herbicides as a fast burndown or control weeds in rights-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.

Spot spray: Apply either 1-2 qts. of SHARDA DIQUAT DIBROMIDE 37.3% SL plus the labeled rate of a 75% or greater nonionic surfactant per 100 gals, water, or 0.75 oz. (22 mls.) SHARDA DIQUAT DIBROMIDE 37.3% SL plus the labeled rate of a 75% or greater nonionic surfactant per 1 gal. of water.

Broadcast: 1-2 pts. SHARDA DIQUAT DIBROMIDE 37.3% SL per acre in sufficient water to insure good spray coverage. Add the labeled rate of 75% or greater nonionic surfactant per 100 gals, spray mixture. Greater water volumes are necessary if the target plants are tall and/or dense. It is recommended that 60 gals, or greater water volume be used to obtain good coverage of dense weeds.

TURF RENOVATION (ALL TURF AREAS EXCEPT COMMERCIAL SOD FARMS)

To desiccate golf course turf and other turf areas prior to renovation, apply 1-2 pts. of SHARDA DIQUAT DIBROMIDE 37.3% SL per acre plus the labeled rate of a 75% or greater nonionic surfactant in 20-100 gals, of water (4 teaspoons of SHARDA DIQUAT DIBROMIDE 37.3% SL plus the labeled rate of a 75% or greater nonionic surfactant per 1 gal. of water) using ground spray equipment. Apply for full coverage and thorough contact with the turfgrass. Apply only when the turf is dry, free from dew and incidental moisture. For enhanced turf desiccation, especially in the case of thick turfgrass, water volumes should approach 100 gals, of water per acre.

For **suppression** of regrowth and quick desiccation of treated turfgrass, SHARDA DIQUAT DIBROMIDE 37.3% SL may be mixed with other systemic nonselective or systemic post-emergence grassy weed herbicides. Refer to other product labels for specific application directions and restrictions.

Avoid spray contact with, or spray drift to, foliage of ornamental plants or food crops.

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

DORMANT ESTABLISHED TURFGRASS (BERMUDAGRASS, ZOYSIAGRASS), NONFOOD OR

FEED CROP

For control of emerged annual broadleaf and grass weeds, including Little Barley*, Annual Bluegrass, Bromes including Rescuegrass, Sixweeks fescue, Henbit, Buttercup, and Carolina Geranium in established dormant bermudagrass lawns, parks, golf courses, etc.

Apply 1-2 pts. SHARDA DIQUAT DIBROMIDE 37.3% SL per acre in 20-100 gals, of spray mix by ground as a broadcast application. Add the labeled rate of a 75% or greater nonionic surfactant per 100 gals, of spray mixture.

Bermudagrass must be dormant at application. Application to actively growing bermudagrass may cause delay or permanent injury. Users in the extreme Southern areas should be attentive to the extent of dormancy at the time of application.

*For control of Little Barley, apply SHARDA DIQUAT DIBROMIDE 37.3% SL prior to the mid-boot stage.

AQUATIC USE DIRECTIONS

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 1/2 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.

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

Necessary approval and/or permits must be obtained prior to application if required. Consult the responsible State Agencies (i.e., Fish and Game Agencies, State Water Conservation authorities, or Department of Natural Resources).

Treatment of dense weed areas may result in oxygen loss from decomposition of dead weeds. This loss of oxygen may cause fish suffocation. Therefore, treat only 1/3 to 1/2 of the water body area at one time and wait 14 days between treatments.

For best results on submersed weeds, SHARDA DIQUAT DIBROMIDE 37.3% SL should be applied to actively growing (photosynthesizing) weeds when water temperatures have reached or exceeded approximately 50°F, typically during the Spring or early Summer.

For application only to **still water** (i.e. ponds, lakes, and drainage ditches) where there is minimal or no outflow to public waters.

and/or

For applications to **public waters** in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams, rivers, and other slow-moving or quiescent bodies of water for control of aquatic weeds. For use by:

- Corps of Engineers; or
- Federal or State Public Agencies (i.e., Water Management District personnel, municipal officials); or
- Applicators and/or Licensees (Certified for aquatic pest control) that are authorized by the State or Local government.

Treated water may be used according to the following table or until such time as an approved assay (example: PAM II Spectromatic Method) shows that the water does not contain more than the designated maximum contaminant level goal (MCLG) of 0.02 mg/l. (ppm) of diquat dibromide (calculated as the cation).

Water Use Restrictions Following Applications With SHARDA DIQUAT DIBROMIDE 37.3% SL (Days)

Application Rate	Drinking	Fishing and Swimming	Livestock/ Domestic Animals Consumption	Spray Tank Applications** and Irrigation to Turf and Landscape Ornamentals	Spray Tank Applications** and Irrigation to Food Crops and Production Ornamentals
2 gals./surface acre	3 days	0	1 day	3 days	5 days
1 gal./surface acre	2 days	0	1 day	2 days	5 days
0.75 gal. /surface acre	2 days	0	1 day	2 days	5 days
0.50 gal./surface acre	1 day	0	1 day	1 day	5 days

Spot Spray* (< 0.5 Gal./surface acre)	1 day	0	1 day	1 day	5 days
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*Add a nonionic surfactant (with at least 75% of the constituents active as a spray adjuvant) at the rate recommended by the manufacturer.

**For preparing agricultural sprays for food crops, turf or ornamentals (to prevent phytotoxicity), do not use water treated with SHARDA DIQUAT DIBROMIDE 37.3% SL before the specified time period.

When the contents of more than one spray tank is necessary to complete a single aquatic application, no water holding restrictions apply between the consecutive spray tanks.

No applications are to be made in areas where commercial processing of fish, resulting in the production of fish protein concentrate or fish meal, is practiced. Before application, coordination and approval of local and/or State authorities must be obtained.

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 applications made via aircraft, is prohibited. This prohibition does not apply to application made below the water surface via submersed or trailing hoses.

Do not apply this product on cattails (*Typha* spp.) as a target weed species.

Floating and Marginal Weeds Including:

Water lettuce, *Pistia stratiotes*

Water hyacinth, *Eichhornia crassipes*

Duckweed, *Lemna* spp.

Salvinia spp. (including *S. molesta*)

Pennywort (*Hydrocotyle* spp.)

Frog's Bit¹, *Limnobium spongia*

¹Not for use in California

Do not apply this product at a rate greater than 2.5 lbs. a.i./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. a.i./acre-foot per application for the control of submersed weeds

SHARDA DIQUAT DIBROMIDE 37.3% SL may be applied by backpack, airboat, spray handgun, helicopter, airplane, or similar application equipment that results in thorough spray coverage.

Spot Treatment: Apply SHARDA DIQUAT DIBROMIDE 37.3% SL at 2 quarts per 100 gallons spray carrier (0.5% solution) with an approved aquatic wetting agent at 0.25-1.0% v/v (1 quart to 1 gallon per 100 gallons water). Repeat treatments may be necessary for complete control.

Spray to completely wet target weeds but not to runoff. Densely packed weeds or mats may require additional applications due to incomplete spray coverage. Re-treat as needed. For best results, re-treat weed escapes within 2 weeks of the initial treatment.

Broadcast Treatment: Apply SHARDA DIQUAT DIBROMIDE 37.3% SL at the rate of 0.5-2.0 gallons per surface acre in sufficient carrier along with 16-32 oz./A of an approved wetting agent. Re-treat as necessary for densely populated weed areas. Good coverage is necessary for control of the target weeds.

For duckweed control, apply SHARDA DIQUAT DIBROMIDE 37.3% SL at 1-2 gallons/A.

Submersed Weeds Including:

Bladderwort, *Utricularia* spp.

Hydrilla, *Hydrilla verticillata*

Watermilfoils (including Eurasian), *Myriophyllum* spp.

Pondweeds¹, *Potamogeton* spp.

Coontail, *Ceratophyllum demersum*

Elodea, *Elodea* spp.

Brazilian Elodea, *Egeria densa*

Naiad, *Najas* spp.

Algae², *Spirogyra* spp. and *Pithophora* spp.

¹ SHARDA DIQUAT DIBROMIDE 37.3% SL controls *Potamogeton* species except Richardson's pondweed, *P. richardsonii*.

²Suppression only. For control of *Spirogyra* and/or *Pithophora*, use SHARDA DIQUAT DIBROMIDE 37.3% SL in a tank mix with an approved algaecide.

For severe weed or algae infestations, the use of an approved algaecide either as a pretreatment to the SHARDA DIQUAT DIBROMIDE 37.3% SL application or in a tank mix, may result in enhanced weed control.

To control submersed weeds, apply SHARDA DIQUAT DIBROMIDE 37.3% SL in water at 0.5-2.0 gallons per surface acre (per 4 foot water depth). For severe weed infestations, use the 2.0 gallon per

surface acre rate. For best results, re-treat as necessary on 14-21 day intervals. The table below shows how many gallons of SHARDA DIQUAT DIBROMIDE 37.3% SL to apply per surface acre based on water depth.

	Gallons of SHARDA DIQUAT DIBROMIDE 37.3% SL 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.

Subsurface Applications: Where the submersed weed growth, especially Hydrilla, has reached the water surface, apply either in a water carrier or an invert emulsion through boom trailing hoses carrying nozzle tips to apply the dilute spray below the water surface to insure adequate coverage.

Bottom Placement: Where submersed weeds such as Hydrilla, Bladderwort, or Coontail have reached the water surface and/or where the water is slowly moving through the weed growth, the use of an invert emulsion carrier injecting diluted SHARDA DIQUAT DIBROMIDE 37.3% SL near the bottom with weighted hoses may improve control. The addition of a copper based algaecide may improve control. If algae are present along with the submersed weeds, a pretreatment with a copper based algaecide may improve overall control.

Surface Application for Submerged Aquatic Weeds: Apply the recommended rate of SHARDA DIQUAT DIBROMIDE 37.3% SL as a spray in sufficient carrier to fully cover the target area. Applications should be made to ensure complete coverage of the weed areas. In mixed weed populations, use the high rate of application as indicated by weeds present. For dense submersed weeds or water over 2 feet deep, a surface spray is not recommended (SHARDA DIQUAT DIBROMIDE 37.3% SL should be applied subsurface in these situations.)

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