



MATERIAL SAFETY DATA SHEET

AB Harvester

1. Product And Company Identification			
Supplier Applied Biochemists (WI) A division of Advantis Technologies, Inc. W175 N11163 Stonewood Drive, Suite 234 Germantown, WI 53022 Telephone Number: (262) 255-4449 FAX Number: (262) 255-4268 Web Site: www.appliedbiochemists.com		Manufacturer Advantis Technologies, Inc. 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States Telephone Number: (770) 521-5999 FAX Number: (770) 521-5959 Web Site: www.poolspacare.com	
Supplier Emergency Contacts & Phone Number CHEMTREC - DAY OR NIGHT: (800) 424-9300		Manufacturer Emergency Contacts & Phone Number CHEMTREC - DAY OR NIGHT: (800) 424-9300	
Issue Date: 04/25/2008 Product Name: AB Harvester Chemical Name: Diquat dibromide CAS Number: 85-00-7 Chemical Family: Bipyrilium (dipyridilium) contact herbicide MSDS Number: 390			
2. Composition/Information On Ingredients			
Ingredient Name		CAS Number	Percent Of Total Weight
DIQUATDIBROMIDE		85-00-7	
Ingredients listed in this section have been determined to be hazardous as defined in 29CFR 1910.1200. Materials determined to be health hazards are listed if they comprise 1% or more of the composition. Materials identified as carcinogens are listed if they comprise 0.1% or more of the composition. Information on proprietary materials is available in 29CFR 1910.1200(i)(1).			
Hazards Identification (Pictograms)			
 			
3. Hazards Identification			
Eye Hazards Irritating to eyes.			
Skin Hazards Irritating if absorbed through the skin.			
Ingestion Hazards Harmful if swallowed.			
Inhalation Hazards Toxic if inhaled.			
Conditions Aggravated By Exposure None known.			

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First Aid (Pictograms)



4. First Aid Measures

Eye

In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a physician or a poison control center immediately.

Skin

Remove contaminated clothing and shoes. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion

Call a physician or a poison control center immediately. Have the person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious victim.

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. Call a physician or a poison control center immediately.

Note To Physician

To be effective, treatment for ingestion of the product must begin IMMEDIATELY. Treatment consists of binding the active ingredient, 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.

Fire Fighting (Pictograms)



5. Fire Fighting Measures

Flash Point: NA °F
Flash Point Method: NA
Flammability Class: Not applicable
Lower Explosive Limit: NA
Upper Explosive Limit: NA

Fire And Explosion Hazards

This product may form flammable and explosive hydrogen gas when in contact with aluminum. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media

Use dry chemical, foam, or CO2 extinguishing media.

Fire Fighting Instructions

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

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6. Accidental Release Measures

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in PPE Section. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

Handling & Storage (Pictograms)



7. Handling And Storage

Handling And Storage Precautions

This product reacts with aluminum to produce flammable hydrogen gas. Do not mix or store in containers or systems made of aluminum or having aluminum fittings.

Handling Precautions

Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Storage Precautions

Store the material in a well-ventilated area, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area.

Protective Clothing (Pictograms)



8. Exposure Controls/Personal Protection

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits.

Eye/Face Protection

Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Skin Protection

Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Respiratory Protection

A NIOSH-certified combination air-purifying respirator with an N, P, or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

Other/General Protection

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

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8. Exposure Controls/Personal Protection - Continued

Ingredient(s) - Exposure Limits

DIQUAT DIBROMIDE

OSHA PEL: Not established

ACGIH TLV: 0.5 mg/m³ TWA (total dust); 0.08 mg/m³ TWA (respirable dust)

Other: 0.5 mg/m³ TWA (recommended by NIOSH)

9. Physical And Chemical Properties

Appearance

Dark brown liquid.

Odor

Odorless

Chemical Type: Mixture

Physical State: Liquid

Melting Point: Not available °F

Boiling Point: Not available °F

Specific Gravity: 1.20 g/ml @ 68 deg F (20 deg C)

Vapor Pressure: <10(-8) mmHg @ 77 deg F

pH Factor: 4-6

Solubility: in water: 718,000 mg/l @ 68 deg F / pH 7.2

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Should not be stored in aluminum containers. Spray solutions should not be mixed, stored, or applied in containers other than plastic, plastic-lined steel, stainless steel or fiberglass.

Incompatible Materials

Strong alkalis and anionic wetting agents (e.g. alkyl and alkylaryl sulfonates). Corrosive to aluminum.

Hazardous Decomposition Products

Flammable to hydrogen gas may be formed on contact with aluminum. Can decompose at high temperatures forming toxic gases.

11. Toxicological Information

Eye Effects

Mildly Irritating (Rabbit)

Skin Effects

Dermal LD50 Rat = >5050 mg/kg body weight

Skin contact: Slightly Irritating (Rabbit)

Acute Oral Effects

Oral LD50 Female Rat = 886 mg/kg body weight

Acute Inhalation Effects

Inhalation LC50 Rat = 0.62 mg/l air - 4 hours

Subchronic (Target Organ Effects)

Diquat dibromide: Kidney weight decreases and cataracts seen in dogs at 12.5 mg ion/kg/d.

No evidence for neurotoxic effects in rats dosed up to 400 ppm ion in the diet for 13 weeks.

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11. Toxicological Information - Continued

Chronic/Carcinogenicity

Diquat dibromide: No evidence of carcinogenicity in rat and mouse studies.

Reproductive Effects

Mutagenicity: No evidence in in vivo assays.

Development Toxicity: In rabbit studies a small percentage of fetuses had minor defects at 3 and 10 mg ion/kg/d.

12. Ecological Information

Ecotoxicological Information

Diquat dibromide: Very toxic to aquatic organisms.

Acute Toxicity - Fish And Invertebrates

Diquat dibromide:

Invertebrates (Water Flea) 48 Hour LC50 0.77ppm

Fish (Rainbow Trout) 96 Hour LC50 14.83ppm

Fish (Bluegill Sunfish) 96 Hour LC50 13.9ppm

Bee (Contact) LD50 100 ug/bee

Invertebrate (Water Flea) 21-day LOEC 0.17ppm

Fish (Fathead Minnow) 34-Day LOEC 1.5ppm

Acute And Dietary Toxicity - Birds

Diquat dibromide:

Birds (8-day dietary - Bobwhite Quail) LC50 2932ppm

Birds (8-day dietary - Mallard Duck) LC50 > 5000ppm

Bird (Mallard Duck) LD50 Oral 60.6 mg/kg

Bird (Mallard Duck) Reproduction LOEL 25 ppm

Environmental Fate Information

Diquat dibromide: The information presented here is for the active ingredient, diquat dibromide. Stable in soil and water. Immobile in soil. Sinks in water (after 24 hours).

13. Disposal Considerations

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

RCRA Information

RCRA Hazardous Waste Classification (40 CFR 261): Not applicable

14. Transport Information

Proper Shipping Name

Corrosive Liquid, N.O.S. (Diquat Dibromide, 37.3%)

Hazard Class

PGIII, 8

DOT Identification Number

UN1760

*Not regulated by DOT for ground shipments [see exception for material corrosive to steel/aluminum 49 CFR 173.154(d)]

DOT (Pictograms)



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15. Regulatory Information

U.S. Regulatory Information

CERCLA/SARA 302 Reportable Quantity (RQ):

Report product spills >= 268 gal. (based on diquat [RQ=1,000 lbs.] content in the formulation)

TSCA Status:

Exempt from TSCA, subject to FIFRA.

SARA Hazard Classes

Acute Health Hazard


Chronic Health Hazard

SARA Section 313 Notification

Not applicable

State Regulations

California Proposition 65: None

NFPA	HMIS								
	<table><tbody><tr><td>HEALTH</td><td>2</td></tr><tr><td>FLAMMABILITY</td><td>1</td></tr><tr><td>REACTIVITY</td><td>0</td></tr><tr><td>PERSONAL PROTECTION</td><td>C</td></tr></tbody></table>	HEALTH	2	FLAMMABILITY	1	REACTIVITY	0	PERSONAL PROTECTION	C
HEALTH	2								
FLAMMABILITY	1								
REACTIVITY	0								
PERSONAL PROTECTION	C								

16. Other Information

Revision/Preparer Information

MSDS Preparer: JHW

Disclaimer

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Applied Biochemists (WI)

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