

SAFETY DATA SHEET

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:	1-800-654-6911 (OUTSIDE USA: 1-423-780-2970)
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:	1-800-424-9300 (OUTSIDE USA: 1-703-527-3887)
FOR ALL SDS QUESTIONS & REQUESTS, CALL:	1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

PRODUCT NAME: **AB HARVESTER**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Supplier Applied Biochemists (WI) W175 N11163 Stonewood Drive , Suite 234 Germantown, WI, 53022 USA	REVISION DATE: 05/26/2015 SUPERCEDES: 06/25/2010
Telephone: +12622554449 Telefax: +12622554449 Web: www.appliedbiochemists.com	MSDS Number: 000000024514 SYNONYMS: CHEMICAL FAMILY: None DESCRIPTION / USE: None established FORMULA: None established

Manufacturer
Advantis Technologies
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral)	:	Category 4
Acute toxicity (Inhalation)	:	Category 2
Eye irritation	:	Category 2B
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure	:	Category 1

GHS Label element

Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 Harmful if swallowed.
 H320 Causes eye irritation.
 H330 Fatal if inhaled.
 H335 May cause respiratory irritation.
 H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

: **Prevention:**
 P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P284 Wear respiratory protection.
Response:
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P314 Get medical advice/ attention if you feel unwell.
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
Storage:
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME
 diquat dibromide

CAS #
 85-00-7

% RANGE
 30 - 40

SECTION 4. FIRST AID MEASURES

General Advice:	Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation:	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.
Skin Contact:	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.
Eye Contact:	IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion:	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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Notes 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.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
Flash Point:	Not applicable
Fire / Explosion Hazards:	Reacts with most metals to form flammable hydrogen gas.
Extinguishing Media:	Carbon dioxide (CO ₂) Dry powder Foam
Fire Fighting Instructions:	Use water spray to cool unopened containers. In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.
Hazardous Combustion Products:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.

Spill Mitigation Procedures

Air Release:

Keep people away from and upwind of spill/leak.

Water Release:

If the product contaminates rivers and lakes or drains inform respective authorities.

Land Release:

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). The product should not be allowed to enter drains, water courses or the soil.

Additional Spill Information :

Prevent further leakage or spillage if safe to do so. Evacuate personnel to safe areas. Use personal protective equipment as required.

SECTION 7. HANDLING AND STORAGE

Handling:

Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.

Storage:

Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Contact with reactive metals, e.g., aluminum may result in the generation of flammable hydrogen gas. Do not store in aluminum containers.

Incompatible Materials for Storage:

Refer to Section 10, "Incompatible Materials."

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection :

Wear a NIOSH approved respirator if levels above the exposure limits are possible., A NIOSH approved full-face air purifying respirator with organic vapor/acid gas cartridge. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection :

Avoid contact with skin. Impervious gloves

Eye Protection:

Safety goggles

Protective Clothing Type:

Polyethylene and ethylene vinyl alcohol copolymer such as 4H.

General Protective Measures:

Ensure that eyewash stations and safety showers are close to the workstation location. Medical Surveillance: Consideration should be given to putting in place a medical surveillance program to monitor Diquat levels of employees potentially exposed to Diquat dibromide. Workers with prolonged exposures to Diquat dibromide at levels approaching 0.5 mg/m³ should be given frequent eye examinations to detect early changes indicative of cataract formation.

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
diquat dibromide (85-00-7)	TWA	0.5 mg/m ³	ACGIH (03 2014)
		Dermal absorption possible	ACGIH (03 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	No data.
Color:	No data.
Odor:	No data.
Molecular Weight:	None established
pH :	4.0 - 6.0 ()
Boiling Point:	no data available
Melting point/freezing point	No data
Density	Not applicable
Bulk Density:	() no data available
Vapor Pressure:	
Vapor Density:	no data available
Viscosity:	no data available no data available
Solubility in Water:	718 g/l 68 °F (20 °C)
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	no data available
Oxidizing:	None established
Volatiles, % by vol.:	no data available
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary: Stable under normal conditions.
 Conditions to Avoid: Heat
 Chemical Incompatibility: Aluminium, strong alkalies
 Hazardous Decomposition Products: Carbon oxides, Nitrogen oxides (NOx)
 Decomposition Temperature: No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

diquat dibromide LD50 Believed to be 215 - 235 mg/kg Rat

Component Animal Toxicology

Dermal LD50 value:

diquat dibromide LD50 > 400 mg/kg Rabbit

Component Animal Toxicology

Inhalation LC50 value:

diquat dibromide LC50 6 h = 0.97 mg/l Rat

Product Animal Toxicity

Oral LD50 value: LD50 = 886 mg/kg Rat

Dermal LD50 value: LD50 > 5,050 mg/kg Rabbit

Inhalation LC50 value: LC50 4 h = 0.62 mg/l Rat LC50 1 h Believed to be approximately 2.48 mg/l Rat

Skin Irritation: This material is expected to be slightly irritating.

Eye Irritation: Mild eye irritation

Skin Sensitization: This material tested negative for skin sensitization in animals., Negative skin sensitizer, guinea pig - Buehler Method

Acute Toxicity: May cause mild skin and eye irritation. Ingestion may cause mild gastrointestinal discomfort. Inhalation of mist or vapor may cause irritation to the mucous membranes of the respiratory tract.

Subchronic / Chronic Toxicity: Animal studies suggest that chronic (repeated) overexposure may result in damage to the liver and kidney., May cause cataract formation with prolonged or repeated exposure.

Reproductive and Developmental Toxicity: This chemical has been tested in laboratory animals and there was no evidence of reproductive toxicity or teratogenicity., This product has been tested in laboratory animals and was found to cause developmental toxicity only at maternally toxic doses.

Mutagenicity: This product has been tested for mutagenicity. Tests revealed both positive and negative results.

Carcinogenicity: The carcinogenicity has been evaluated through animal study and it was found not to be carcinogenic.

SECTION 12. ECOLOGICAL INFORMATION

Overview: Slightly toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: diquat dibromide

Oncorhynchus mykiss (rainbow trout)	- static test 96 h LC50 = 14.83 mg/l
Lepomis macrochirus (Bluegill sunfish)	- static test 96 h LC50 = 13.9 mg/l
Cyprinodon variegatus (sheepshead minnow)	- static test 96 h LC50 = 228 mg/l
Brown trout (Salmo trutta),	- static test 96 h LC50 = 17.77 mg/l
Gambusia affinis (Mosquito fish)	- static test 96 h LC50 = 289 mg/l
Pimephales promelas (fathead minnow)	- static test 96 h LC50 = 14 mg/l
Daphnia magna (Water flea)	- static test 48 h EC50= 0.77 mg/l
Opossum Shrimp	- static test 96 h LC50= 2.0 mg/l
Crangon crangon (shrimp)	- static test 48 h LC50> 10 mg/l
Crassostrea virginica (Eastern oyster)	- flow-through test 96 h EC50> 260 mg/l
Colinus virginianus (Bobwhite quail)	- 8 day dietary LC50 = 2,932 ppm
Anas platyrhynchos (Mallard duck)	- 8 day dietary LC50 > 5,000 ppm
Anas platyrhynchos (Mallard duck)	- Oral LD50 = 564 mg/kg

SECTION 13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

Disposal Methods : As a nonhazardous liquid waste, it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 1760
 Description of the goods : Corrosive liquids, n.o.s.
 : (diquat dibromide)
 Class : 8
 Packing group : III
 Labels : 8
 Emergency Response : 154
 Guidebook Number

TDG

UN number : 1760
 Description of the goods : CORROSIVE LIQUID, N.O.S.
 : (diquat dibromide)
 Class : 8
 Packing group : III
 Labels : 8

IATA

UN number : 1760
 Description of the goods : Corrosive liquid, n.o.s.
 : (diquat dibromide)
 Class : 8
 Packing group : III
 Labels : 8
 Packing instruction (cargo aircraft) : 856
 Packing instruction (passenger aircraft) : 852
 Packing instruction (passenger aircraft) : Y841

IMDG-CODE

UN number : 1760
 Description of the goods : CORROSIVE LIQUID, N.O.S.
 : (diquat dibromide)
 Class : 8
 Packing group : III
 Labels : 8
 EmS Number 1 : F-A
 EmS Number 2 : S-B
 Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
diquat dibromide	85-00-7	1000	2681

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

diquat dibromide	85-00-7	37.3 %
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This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

diquat dibromide 85-00-7

Pennsylvania Right To Know

diquat dibromide 85-00-7

New Jersey Right To Know

diquat dibromide 85-00-7

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

- TSCA : This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.
- : diquat dibromide

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: First formulated version in SAP.
Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .