



MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Helm Diquat AG

Manufacturer Name:
Helm Agro US, INC.
8295 Tournament Drive Suite #310
Memphis, TN 38125

Emergency Telephone:
ChemTrec 800-424-9300

Non-emergency Telephone:
901-312-1525

Intended Use: Herbicide

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Liquid

Color: Dark brown

Odor: Odorless

DANGER!

Harmful if swallowed. Causes eye irritation. May be fatal if inhaled.

Potential Health Effects

Inhalation: May be fatal if inhaled.

Eye Contact: Causes eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

Skin Contact: None known.

Ingestion: Harmful if swallowed.

Target Organ(s): | Eye | Kidney |

OSHA Regulatory Status: This product is hazardous according to OSHA 29CFR 1910.1200.

3 COMPOSITION / INFORMATION ON INGREDIENTS

General Information: This product is toxic to fish and aquatic organisms.

Chemical Name	CAS-No.	Concentration*
†Diquat dibromide	85-00-7	37.3%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

† This chemical is hazardous according to OSHA/WHMIS criteria.

4 FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary. Get medical attention immediately.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Skin Contact: Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

Ingestion: Give one or two glasses of water if patient is alert and able to swallow. Seek immediate medical attention. Do not induce vomiting.

5 FIRE-FIGHTING MEASURES

Extinguishing Media: Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable Extinguishing Media: Not applicable.

Special Fire Fighting Procedures: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Unusual Fire & Explosion Hazards: None known.

Hazardous Combustion Products: Bromides, Carbon Oxides, Chlorides, Nitrogen Oxides

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate personal protective equipment.

Spill Cleanup Methods: Small Liquid Spills: Absorb up with sand or other non-combustible absorbent material. Large Spillages: Flush area with water. Prevent runoff from entering drains, sewers, or streams.

7 HANDLING AND STORAGE

Handling: Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

Storage: Store away from incompatible materials.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Eye Protection: Wear safety glasses with side shields (or goggles).

Hand Protection: It is a good industrial hygiene practice to minimize skin contact.

Skin Protection: Apron and long sleeves are recommended. Risk of contact: Full protective clothing should be worn when handling this product.

Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental Exposure Controls: Environmental manager must be informed of all major spillages.

9 PHYSICAL AND CHEMICAL PROPERTIES

Color: Dark brown

Odor: Odorless

Physical State: Liquid

pH: 4 - 6

Specific Gravity: 1.2 (20°C)

Solubility in Water: Soluble

10 STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: None known.

Incompatible Materials: Aluminum. Strong oxidizing agents.

Hazardous Decomposition Products: No data available.

11 TOXICOLOGICAL INFORMATION

Specified Substance(s)

Acute Toxicity:

Test Results: No test data available for the ingredients.

Listed Carcinogens: None.

Product Information

Acute Toxicity:

Test Results: Oral LD50 (Rat): 886 mg/kg
Dermal LD50 (Rat): > 5050 mg/kg
Inhalation LC50 (4 hour(s), Rat): 0.62 mg/l

Other Acute: Causes eye irritation.

Chronic Toxicity: No additional adverse health effects noted.

12 ECOLOGICAL INFORMATION

Ecotoxicity: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Product

LC50 (Bluegill Sunfish): 13.9 ppm (v)
LC50 (Fish): 14.8 ppm (v)
EC50 (Water Flea): 0.77 - 1.19 ppm (v)

Mobility: May cause long-term adverse effects in the aquatic environment.

Persistence and Degradability: No data available.

Bioaccumulation Potential: No data available.

13 DISPOSAL CONSIDERATIONS

General Information: Dispose of waste and residues in accordance with local authority requirements.

Disposal Methods: No specific disposal method required.

Container: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14 TRANSPORT INFORMATION

DOT

UN No.: UN1760

Proper Shipping Name: Corrosive liquids, n.o.s. (Diquat dibromide)

Class: 8

Packing Group: III

Label(s): 8

TDG

UN No.: UN1760

Proper Shipping Name: Corrosive liquids, n.o.s. (Diquat dibromide)

Class: 8

Packing Group: III

IATA

UN No.: UN1760

Proper Shipping Name: Corrosive liquid, n.o.s. (Diquat dibromide)

Class: 8
Packing Group: III
Label(s): Corrosive

IMDG

UN No.: UN1760
Proper Shipping Name: Corrosive liquids, n.o.s. (Diquat dibromide)
Class: 8
Packing Group: III
EmS No.: F-A, S-B

15	REGULATORY INFORMATION
-----------	-------------------------------

Canadian Controlled Products Regulations: This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS Classification: D1A, D2B, E

Mexican Dangerous Statement: This product is dangerous according to Mexican regulations.

Inventory Status

Inventory Status: All components of this product are either listed or are exempt from listing on the U.S. Toxic Substances Control Act (TSCA).

US Regulations**CERCLA Hazardous Substance List (40 CFR 302.4):**

Chemical Name	RQ
Diquat dibromide	1000 lbs

SARA Title III

Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A): Not regulated.

Section 311/312 (40 CFR 370):

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

Section 313 Toxic Release Inventory (40 CFR 372): Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
Not regulated.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): Diquat dibromide

Drug Enforcement Act: Not regulated.

TSCA

TSCA Section 4(a) Final Test Rules & Testing Consent Orders: Not regulated.

TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs) (40CFR 721, Subpt. E): Not

regulated.

TSCA Section 5(e) PMN-Substance Consent Orders: Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): Not regulated.

Massachusetts Right-To-Know List: Diquat dibromide

Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)): Not regulated.

Minnesota Hazardous Substances List: Not regulated.

New Jersey Right-To-Know List: Dipyrido[1,2-a:2',1'-c]pyrazinediium, 6,7-dihydro-, dibromide

Pennsylvania Right-To-Know List: Dipyrido[1,2-a:2',1'-c]pyrazinediium, 6,7-dihydro-, dibromide

Rhode Island Right-To-Know List: Diquat

16	OTHER INFORMATION
-----------	--------------------------

HAZARD RATINGS

	Health Hazard	Fire Hazard	Instability	Special Hazard
NFPA	3	1	0	NONE

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

NFPA Label colored diamond code: Blue - Health; Red - Flammability; Yellow - Instability; White - Special Hazards

	Health Hazard	Flammability	Physical Hazard	Personal Protection
HMIS	3	1	0	--

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

HMIS Label colored bar code: Blue - Health; Red - Flammability; Orange - Physical Hazards; White - Special

Issue Date: 28-May-2008

Supersedes Date: New

SDS No.: 1013559

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.