# MATERIAL SAFETY DATA SHEET

**Emergency Phone: Chemtrec 800-424-9300** Effective Date: March 25, 2009

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME: Alligare Diquat Herbicide**
**DESCRIPTION:** A liquid herbicide.
EPA Reg. No. 81927-35

**COMPANY IDENTIFICATION:**
Alligare, LLC
13 North 8th Street
Opelika, AL 36801
888-255-4427

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient | Chemical Name | Chemical Formula | CAS Number | Composition |
|---|---|---|---|---|
| Diquat dibromide | [6,7-dihydrodipyrido(1,2-a:2',1'-c) pyrazinediium dibromide] | $C_{12}H_{12}Br_2N_2$ | 85-00-7 | 37.3% |

## 3. HAZARD IDENTIFICATION

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS:** Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation.

**ENVIRONMENTAL HAZARDS:** This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas before the mean high after mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

**HAZARDOUS DECOMPOSITION PRODUCTS:** This product forms flammable hydrogen gas when in contact with aluminium.

## 4. FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

**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 by mouth to an unconscious person.

**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.

**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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**NOTE TO PHYSICIAN:** 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 hemoperfusion or continuous hemodialysis.

## 5. FIRE-FIGHTING MEASURES

**Flash point (PMA-4):** N/A

**Flammable Limits (LFL-UFL):** N/A

**Fire and Explosion Hazards:** Not a fire or explosion hazard.

**Means of Extinction:** Foam, dry chemical or $CO_2$

**Fire Fighting Instructions:** Evacuate nonessential personnel to prevent exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area and equipment until decontaminated. Dike and collect any runoff to prevent entry to drains or water bodies.

**Firefighting Equipment:** Self-contained breathing apparatus and full bunker gear.

**Hazardous Combustion Products:** Thermal decomposition may result in irritating and possibly toxic gasses.

**NFPA Ratings:** Health – 2 / Flammability – 1 / Reactivity – 0

## 6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately observing the precautions in Section 8 of this MSDS. Control spill at the source and dike spill to prevent material from entering soil, sewers, waterways or low areas. Cover entire spill with absorbing material and place into compatible disposal containers. Scrub the area with hard water detergent (e.g., Tide, Joy, Spic and Span) and pick up wash liquid with absorbent and place into compatible disposal containers. Once all material is cleaned up and placed in disposal containers, seal the containers and arrange for disposition.

## 7. HANDLING AND STORAGE

Avoid breathing spray mist. Avoid contact with eyes or clothing. Remove clothing / PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

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.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Handle only with adequate ventilation. Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

**Protective Clothing:** Chemical-resistant gloves, chemical resistant footwear plus socks, protective eyewear, coveralls over short-sleeved shirt and short pants or coveralls over long-sleeved shirt and long pants. Chemical-resistant headgear for overhead exposure. Chemical-resistant apron when cleaning equipment, mixing or loading. Face shield when mixing or loading.

**General:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Dark Brown Liquid
**Odor:** Odorless
**pH:** 5.5 – 6.5
**Viscosity:** 1.6264 mP.s
**Density:** 1.2006 g/mL

## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Heat, flame and extreme temperatures.

**CHEMICAL STABILITY:** Stable under normal use and storage conditions.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When heated may thermally decompose releasing irritation or toxic gasses.

**INCOMPATIBILITY WITH OTHER MATERIALS:** Product reacts with aluminum to form flammable hydrogen gas, do not store in aluminum containers. Mix, store and apply only in plastic, plastic lined steel, stainless steel or fiberglass containers.

**POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**ACUTE ORAL TOXICITY**
Oral $LD_{50}$ (rat): 886 mg/kg

**ACUTE DERMAL TOXICITY**
Dermal $LD_{50}$ (rat): > 5,050 mg/kg

**ACUTE INHALATION TOXICITY**
Inhalation $LC_{50}$ (rat): 0.62 mg/L

**EYE IRRITANT**
Rabbit – Causes mild eye irritation

**SKIN IRRITATION**
Rabbit – Causes slight skin irritation

**SENSITIZATION**
Guinea Pig – Not a contact sensitizer

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** None known.

**CARCINOGENICITY:**
**ACGIH:** Not listed
**IARC:** Not listed
**NTP:** Not listed
**OSHA:** Not listed

**MUTAGENIC DATA:** No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

**ADDITIONAL DATA:** Not known to cause reproductive or birth defects at normal exposure levels.

## 12. ECOLOGICAL INFORMATION

**The following information is for the active ingredient, Diquat Dibromide:**

**AQUATIC TOXICITY**
Rainbow Trout ($LC_{50}$): 14.83 ppm
Water Flea ($EC_{50}$): 0.77 ppm
Green Algae ($EC_{50}$): 9.4 ppb

**AVIAN TOXICITY**
Mallard Duck ($LD_{50}$): 60.6 mg/kg

## 13. DISPOSAL CONSIDERATIONS

**Do not contaminate water, food or feed by disposal.**

**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. Offer for recycling if available. Clean container promptly after emptying. 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.

## 14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: UN1760, Corrosive Liquid N.O.S. (Diquat Dibromide), 8, PG III
DOT EMERGENCY RESPONSE GUIDE: 154
NOTE: Corrosive to aluminum.

SPECIAL AIRCRAFT LIMITATIONS:
Cargo Aircraft: Inner packages > 5L and single packages > 60L are prohibited.
Passenger Aircraft: Inner packages > 2.5L and outer packages > 5L are prohibited.

MARINE POLLUTANT: Yes

## 15. REGULATORY INFORMATION

**FIFRA –**
All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

**SARA Title III – Section 302 Extremely Hazardous Substances**
Not Listed

**SARA Title III – Section 311/312 Hazard Categories**
Immediate, Delayed

**SARA Title III – Section 312 Threshold Planning Quantity**
The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

**SARA Title III – Section 313 Reportable Ingredients**
None

**CERCLA –**
Diquat (85-00-7) 1000 lbs (report spills ≥ 268 gallons)

**CALIFORNIA PROP 65 STATUS –**
This product does not contain any chemicals known to the state of California to cause cancer or reproductive toxicity.

## 16. OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

**DISCLAIMER:**

THE INFORMATION IN THIS MSDS IS BASED ON DATA AVAILABLE AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT ALLIGARE, LLC TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS. JUDGMENTS AS TO THE SUITABILITY OF THE INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES IS NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, ALLIGARE, LLC EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.