

## REWARD® Landscape and Aquatic

Date: 12/31/2014  
 Replaces: 2/4/2011

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **REWARD® Landscape and Aquatic**

Product No.: A12872A  
 Use: Herbicide  
 Manufacturer: Syngenta Crop Protection, LLC  
 Post Office Box 18300  
 Greensboro NC 27419  
 Manufacturer Phone: 1-800-334-9481

**Emergency Phone: 1-800-888-8372**

### 2. HAZARDS IDENTIFICATION

Classifications: Corrosive to Metals: Category 1  
 Oral: Category 4  
 Inhalation: Category 3  
 Specific Target Organ Toxicity: Repeated Category 2  
 Eye Damage/Irritation: Category 2B

Signal Word (OSHA): **Danger**

Hazard Statements: May be corrosive to metals  
 Harmful if swallowed  
 Causes eye irritation  
 Toxic if inhaled  
 May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Keep only in original container.  
 Do not breathe mist, vapors, spray.  
 Wash hands and face thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 If swallowed: Call a poison center, doctor or Syngenta if you feel unwell. Rinse mouth.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists: Get medical advice.

## REWARD® Landscape and Aquatic

Date: 12/31/2014  
Replaces: 2/4/2011

Call a poison center, doctor or Syngenta.  
Get medical advice if you feel unwell.  
See Section 4 First Aid Measures.  
Absorb spillage to prevent material damage.  
Store locked up.  
Store in corrosive resistant plastic, plastic-lined steel, stainless steel or fiberglass container.  
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to Avoid", Section 10.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
		Trade Secret	
Other ingredients	Other ingredients	Trade Secret	62.7%
[6,7-dihydrodipyrido(1,2-a:2',1'-c)pyrazinediium dibromide]	Diquat Dibromide	85-00-7	37.3%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

### 4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

**Ingestion:** If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for 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 Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

**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 Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Eye irritation

Indication of immediate medical attention and special treatment needed:

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.

**REWARD® Landscape and Aquatic**

Date: 12/31/2014

Replaces: 2/4/2011

**5. FIRE FIGHTING MEASURES**

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific 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.

Special protective equipment and precautions for firefighters:

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.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

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 Section 8. 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.

**7. HANDLING AND STORAGE**

Precautions for safe handling:

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.

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

Conditions for safe storage, including any incompatibilities:

Store locked up.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Diquat Dibromide	Not Established	0.5 mg/m <sup>3</sup> TWA	0.5 mg/m <sup>3</sup> TWA (0.5 total; 0.08 respirable)	Manufacturer

## REWARD® Landscape and Aquatic

Date: 12/31/2014

Replaces: 2/4/2011

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

**Ingestion:**

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.

**Eye Contact:**

Where eye contact is likely, use chemical splash goggles.

**Skin Contact:**

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

**Inhalation:**

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark brown liquid

Odor: Odorless

Odor Threshold: Not Available

pH: 4 - 6

Melting point/freezing point: Not Applicable

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): Not Applicable

Flammable Limits (% in Air): Not Available

Flammability: Not Applicable

Vapor Pressure: Diquat Dibromide < 10(-8) mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 1.202 g/ml @ 68°F (20°C)

Solubility (ies): Diquat Dibromide 718,000 mg/l @ 68°F (20°C) and pH 7.2

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Applicable

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

## REWARD® Landscape and Aquatic

Date: 12/31/2014

Replaces: 2/4/2011

### 10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to Avoid: Concentrate 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: None known.

Hazardous Decomposition Products: Flammable hydrogen gas may be formed on contact with aluminum. See "Conditions to Avoid", Section 10.

### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation

Delayed, immediate and chronic effects of exposure: Eye irritation

#### Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Female Rat) :	886 mg/kg body weight
Dermal:	Dermal (LD50 Rabbit) :	> 5050 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	0.62 mg/l air - 4 hours
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

#### Reproductive/Developmental Effects

Diquat Dibromide: 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.

#### Chronic/Subchronic Toxicity Studies

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.

#### Carcinogenicity

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

Chemical Name	NTP/IARC/OSHA Carcinogen
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Other ingredients	No
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[6,7-dihydrodipyrido(1,2-a:2',1'-c)pyrazinediium dibromide]	No
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**REWARD® Landscape and Aquatic**

Date: 12/31/2014

Replaces: 2/4/2011

Other Toxicity Information

None

Toxicity of Other Components

Not Applicable

Other ingredients

Not Applicable

Target Organs

Active Ingredients

Diquat Dibromide: Eye, kidney

Inert Ingredients

: Not Applicable

Other ingredients: Not Applicable

**12. ECOLOGICAL INFORMATION**

Eco-Acute Toxicity

Diquat Dibromide:

Fish (Rainbow Trout) 96-hour LC50 14.83 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.77 ppm

Green Algae 4-day EC50 9.4 ppb

Bird (Mallard Duck) 14-day LD50 60.6 mg/kg

Environmental Fate

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 h).

**13. DISPOSAL CONSIDERATIONS**

Disposal:

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

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

**14. TRANSPORT INFORMATION**

DOT Classification

Ground Transport - NAFTA

Proper Shipping Name: Corrosive Liquid, N.O.S. (Diquat Dibromide)

Hazard Class: Class 8

Identification Number: UN 1760

Packing Group: PG III

Comments

Water Transport - International

## REWARD® Landscape and Aquatic

Date: 12/31/2014  
 Replaces: 2/4/2011

Proper Shipping Name: Corrosive Liquid, N.O.S. (Diquat Dibromide), Marine Pollutant  
 Hazard Class: Class 8  
 Identification Number: UN 1760  
 Packing Group: PG III

Air Transport  
 Proper Shipping Name: Corrosive Liquid, N.O.S. (Diquat Dibromide)  
 Hazard Class: Class 8  
 Identification Number: UN 1760  
 Packing Group: PG III

### 15. REGULATORY INFORMATION

#### Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with eyes, skin, or clothing.

EPA Registration Number(s):  
 100-1091

#### EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: None

#### CERCLA/SARA 304 Reportable Quantity (RQ):

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

#### RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

#### TSCA Status:

Exempt from TSCA, subject to FIFRA

### 16. OTHER INFORMATION

#### NFPA Hazard Ratings

Health: 2  
 Flammability: 1  
 Instability: 0

#### HMIS Hazard Ratings

Health: 2  
 Flammability: 1  
 Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Syngenta Hazard Category: C,S

For non-emergency questions about this product call:

1-800-334-9481

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Original Issued Date: 6/27/2007  
Revision Date: 12/31/2014 Replaces: 2/4/2011  
Section(s) Revised: 1-16

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