

DIQUAT

DIQ

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Aquacide Dextrone Diquat dibromide Regalon Reglone	Solid Yellow Reddish-brown Sinks and mixes with water.
<p>Evacuate. Keep people away. Avoid contact with liquid or solid. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	Not flammable.
Exposure	<p>CALL FOR MEDICAL AID.</p> <p>SOLID OR LIQUID POISONOUS IF INHALED OR SWALLOWED. Irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting.</p>
Water Pollution	Dangerous to aquatic life in high concentrations. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

<p>1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge Collection Systems: Dredge Chemical and Physical Treatment: Absorb</p>	<p>2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: C₁₂H₂N₂X₂ where X = Br 2.3 IMO/UN Designation: 6.1/1609 (>5%); 9/1609 (<5%) 2.4 DOT ID No.: Not listed. 2.5 CAS Registry No.: 85-00-7 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 59110</p>
<p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Wear face shield, rubber gloves, rubber apron when handling concentrate. When spraying, wear waterproof foot wear and clothing.</p> <p>3.2 Symptoms Following Exposure: INHALATION: No appreciable vapor pressure. Prolonged contact with spray or mist may cause oral and nasal irritation. EYES: Irritation. SKIN: Irritation. INGESTION: Vomiting, diarrhea, general malaise. Possible kidney and liver damage, dyspnea, and pulmonary edema. With large doses there may be tremors or convulsions. OTHER: May be fatal if swallowed, inhaled, or absorbed through skin.</p> <p>3.3 Treatment of Exposure: Call a doctor. EYES: Irrigate for a prolonged period. SKIN: Remove clothing immediately and wash thoroughly. INGESTION: Gastric lavage, saline cathartics, forced diuresis, and symptomatic treatment.</p> <p>3.4 TLV-TWA: 0.5 mg/m³ inhalable particles; 0.1 mg/m³ respirable particles.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Grade 3; LD₅₀ = 50 to 500 mg/kg.</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Prolonged feeding produced cataract in rats and dogs. (In rat after 100 weeks at concentration 36 ppm; in dog after 15 months at concentration 150 ppm). 2.5 mg/kg for 24 months (oral-rat) caused no adverse effects.</p> <p>3.10 Vapor (Gas) Irritant Characteristics: Not pertinent</p> <p>3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin.</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13 IDLH Value: Not listed.</p> <p>3.14 OSHA PEL-TWA: Not listed.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p>	

4. FIRE HAZARDS

- 4.1 **Flash Point:**
Not pertinent
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Not pertinent
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Not pertinent
- 4.6 **Behavior in Fire:** Decomposes at high temperature, charring rather than melting or boiling.
- 4.7 **Auto Ignition Temperature:** Not pertinent
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not flammable
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
- 5.2 **Reactivity with Common Materials:**
Concentrated solutions corrode aluminum rapidly. Should not be stored in contact with metals.
- 5.3 **Stability During Transport:** Stable in original containers.
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
96-hour TL₅₀/Bluegills and fathead minnows/140 ppm and 130 ppm in hard water
96-hour TL₅₀/soft water/10 ppm
- 6.2 **Waterfowl Toxicity:** Oral LD₅₀ for young mallards = 564 mg/kg; mallards 5-day LC₅₀ = >5000 ppm.
- 6.3 **Biological Oxygen Demand (BOD):**
Currently not available
- 6.4 **Food Chain Concentration Potential:**
Low - when present in fish, 50% of the residual Diquat lost in <3 weeks.
- 6.5 **GESAMP Hazard Profile:**
Bioaccumulation: 0
Damage to living resources: 2
Human Oral hazard: 2
Human Contact hazard: 1
Reduction of amenities: X

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Technical aqueous solution, 2-lb cation/gal
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** Currently not available
- 7.4 **Venting:** Currently not available
- 7.5 **IMO Pollution Category:** Currently not available
- 7.6 **Ship Type:** Currently not available
- 7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed.
- 8.2 **49 CFR Class:** Not pertinent
- 8.3 **49 CFR Package Group:** Not listed.
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 8.6 **EPA Reportable Quantity:** 1000 pounds
- 8.7 **EPA Pollution Category:** C
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Yes

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
- 9.2 **Molecular Weight:** 184.2 cation; 344.1 dibromide
- 9.3 **Boiling Point at 1 atm:** Not pertinent Salts decompose at high temperatures (above 300°C), charring rather than melting or boiling.
- 9.4 **Freezing Point:** Not pertinent
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.22 to 1.27 at 20°C
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 9.13 **Heat of Combustion:** Not pertinent
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Currently not available
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
70	68.000		N O T P E R T I N E N T		N O T P E R T I N E N T		C U R R E N T L Y N O T A V A I L A B L E