

Issuing Date 16-Sep-2022

Revision date 15-May-2025

Revision Number 2

## 1. Identification

### Product identifier

Product Name Advantage Diquat 240

### Other means of identification

Product Code(s) PMRA Reg. No.: 33731

UN number or ID number UN2922

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Use only as directed on product label

### Details of the supplier of the safety data sheet

#### Supplier Address

Advantage Crop Protection Inc.  
620 4th Avenue East  
Regina, Saskatchewan, Canada  
Phone: 1888 931 2530

### Emergency telephone number

Emergency telephone For Emergency Medical Assistance (Human or Animal) contact Rocky Mountain Poison Control at 866-767-5040  
For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) contact CHEMTREC at 800-424-9300 (North America) or 703-527-3887 (International)

## 2. Hazard(s) identification

### Classification of the substance or mixture

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Category 3 Target organ effects: Respiratory irritation.	
Specific target organ toxicity (repeated exposure)	Category 1

### Label elements

**Danger****Hazard statements**

May be corrosive to metals  
Harmful if swallowed  
Toxic in contact with skin  
Fatal if inhaled  
Causes skin irritation  
Causes serious eye irritation  
May cause an allergic skin reaction  
May cause respiratory irritation  
Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe vapor or mist  
Use only outdoors or in a well-ventilated area  
Wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Keep only in original packaging  
Wear protective gloves, protective clothing, eye protection and face protection

**Precautionary Statements - Response**

Get medical advice/attention if you feel unwell

**Eyes**

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 and attention

**Skin**

IF ON SKIN: Wash with plenty of water and soap  
Call a POISON CENTER or doctor if you feel unwell  
Take off immediately all contaminated clothing and wash it before reuse  
If skin irritation or rash occurs: Get medical advice and attention

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing  
Immediately call a POISON CENTER or doctor

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
Rinse mouth

**Spill**

Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed  
Store in corrosion resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

**Other information**

Very toxic to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Diquat dibromide	85-00-7	35 - 40	-	

### 4. First-aid measures

#### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. IF exposed or concerned: Get medical advice/attention. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
<b>Skin contact</b>	Get immediate medical attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe vapor or mist. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information.

#### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.
<b>Effects of Exposure</b>	Causes damage to organs through prolonged or repeated exposure.

#### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
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### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical or CO2. Foam. Halons.
<b>Unsuitable extinguishing media</b>	None known based on information supplied.
<b>Specific hazards arising from the chemical</b>	May emit toxic fumes under fire conditions. Product is or contains a sensitizer. May cause sensitization by skin contact.
<b>Hazardous combustion products</b>	Carbon oxides, Nitrogen oxides (NOx), Thermal decomposition can lead to release of irritating and toxic gases and vapors.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Do not breathe vapor or mist. Keep people away from and upwind of spill/leak.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

### Methods and material for containment and cleaning up

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapor or mist. Avoid contact with skin, eyes or clothing. Use personal protection equipment. Take off contaminated clothing and wash before reuse. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product.
<b>General hygiene considerations</b>	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Do not breathe vapor or mist. Contaminated work clothing should not be allowed out of the workplace.

### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.
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**Packaging materials** Plastic container. Stainless steel. Fiberglass. Plastic-lined steel. Do not store in containers or systems made of aluminum or having aluminum fittings.

**8. Exposure controls/personal protection**

**Control Parameters**

**Exposure Limits**

Chemical name	Alberta	British Columbia	Ontario	Quebec
Diquat dibromide 85-00-7	TWA: 0.5 mg/m <sup>3</sup> ; TWA: 0.1 mg/m <sup>3</sup> ; respirable pSk	TWA: 0.5 mg/m <sup>3</sup> ; inhalable TWA: 0.1 mg/m <sup>3</sup> ; respirable Sk	TWA: 0.5 mg/m <sup>3</sup> ; TWA: 0.1 mg/m <sup>3</sup> ; respirable fraction dSk	-

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Diquat dibromide	TWA: 0.5 mg/m <sup>3</sup> ; inhalable particulate matter TWA: 0.1 mg/m <sup>3</sup> ; respirable particulate matter pSk	TWA: 0.5 mg/m <sup>3</sup> ; inhalable fraction TWA: 0.1 mg/m <sup>3</sup> ; respirable fraction pSk	TWA: 0.5 mg/m <sup>3</sup> ; inhalable particulate matter TWA: 0.1 mg/m <sup>3</sup> ; respirable particulate matter pSk	TWA: 0.5 mg/m <sup>3</sup> ; inhalable particulate matter TWA: 0.1 mg/m <sup>3</sup> ; respirable particulate matter pSk

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Diquat dibromide	TWA: 0.5 mg/m <sup>3</sup> ; inhalable fraction TWA: 0.1 mg/m <sup>3</sup> ; respirable fraction STEL: 1.5 mg/m <sup>3</sup> ; inhalable fraction STEL: 0.3 mg/m <sup>3</sup> ; respirable fraction Sk	TWA: 0.5 mg/m <sup>3</sup> ; inhalable particulate matter TWA: 0.1 mg/m <sup>3</sup> ; respirable particulate matter	TWA: 0.5 mg/m <sup>3</sup> ; inhalable fraction TWA: 0.1 mg/m <sup>3</sup> ; respirable fraction STEL: 1.5 mg/m <sup>3</sup> ; inhalable fraction STEL: 0.3 mg/m <sup>3</sup> ; respirable fraction pSd	

**Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**9. Physical and chemical properties**

Information on basic physical and chemical properties

**Appearance**

Physical state	Liquid
Color	Dark brown
Odor	Odorless
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Flash point		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
SADT (°C)		No data available
pH	4 - 6	
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available
Dynamic viscosity	1.4 mPa s	
Water solubility		No data available
Solubility(ies)		No data available
Partition Coefficient (n-octanol/water)		No data available
Vapor pressure		No data available
Relative density		No data available
Bulk density		No data available
Liquid Density	1.19 g/mL	
Relative vapor density		No data available
Particle characteristics		No information available
Particle Size		No data available
Particle Size Distribution		No data available

Other information

Molecular weight	No information available
VOC content	No information available
Softening point	No information available

Information with regard to physical hazard classes

**Explosives**

Explosive properties	No information available.
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**Oxidizing properties**

	No information available.
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**10. Stability and reactivity**

<b>Reactivity</b>	None under normal use conditions.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Flammable hydrogen gas may be formed on contact with aluminum.
<b>Conditions to avoid</b>	Exposure to air or moisture over prolonged periods. Excessive heat.

**Incompatible materials** Strong acids, Strong bases, Strong oxidizing agents, Aluminum.

**Hazardous decomposition products** Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**11. Toxicological information**

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components). May cause irritation of respiratory tract.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

**Skin contact** Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. Causes skin irritation. Toxic in contact with skin. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

**Acute toxicity** Fatal if inhaled. Toxic in contact with skin. Harmful if swallowed.

**Numerical measures of toxicity**

The following ATE values have been calculated for the mixture:

ATEmix (oral) 1,165.00 mg/kg  
 ATEmix (dermal) 706.60 mg/kg  
 ATEmix (inhalation-dust/mist) 0.1351 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Diquat dibromide 85-00-7	= 432 mg/kg ( Rat )	262 - 315 mg/kg ( Rat )	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. Causes skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Diquat dibromide 85-00-7	A4 - Not classifiable as a human carcinogen	-	-	-

**Reproductive toxicity** No information available.

<b>STOT - single exposure</b>	May cause respiratory irritation.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	No information available.

**12. Ecological information**

<b>Ecotoxicity</b>	Very toxic to aquatic life with long lasting effects.
<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulative potential</b>	No information available.
<b>Mobility</b>	No information available.
<b>Other adverse effects</b>	No information available.

**13. Disposal considerations**

Disposal methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.

**14. Transport information**

TDG

<b>UN number or ID number</b>	UN2922
<b>Proper shipping name</b>	Corrosive liquid, toxic, n.o.s.
<b>Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>Packing group</b>	III
<b>Special Provisions</b>	16
<b>Marine pollutant</b>	Diquat dibromide.
<b>Description</b>	UN2922, Corrosive liquid, toxic, n.o.s. (Diquat dibromide), 8 (6.1), III

IATA

<b>UN number or ID number</b>	UN2922
<b>UN proper shipping name</b>	Corrosive liquid, toxic, n.o.s.
<b>IATA Technical Name</b>	Diquat dibromide
<b>Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>Special Provisions</b>	A3, A4, A803
<b>ERG Code</b>	8P
<b>Description</b>	UN2922, Corrosive liquid, toxic, n.o.s. (Diquat dibromide), 8 (6.1), III

**IMDG**

<b>UN number or ID number</b>	UN2922
<b>UN proper shipping name</b>	Corrosive liquid, toxic, n.o.s.
<b>Technical Name</b>	Diquat dibromide
<b>Transport hazard class(es)</b>	8
<b>Subsidiary hazard class</b>	6.1
<b>Packing group</b>	III
<b>Marine pollutant name</b>	Diquat dibromide
<b>Marine pollutant indicator</b>	M
<b>Special Provisions</b>	223, 274
<b>EmS-No.</b>	F-A S-B
<b>Description</b>	UN2922, Corrosive liquid, toxic, n.o.s. (Diquat dibromide), 8 (6.1), III, Marine pollutant

**15. Regulatory information**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 4	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 4 *	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X
Chronic Hazard Star Legend		* = Chronic Health Hazard		

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AiIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System

IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption

pSk	Skin notation - potential for cutaneous absorption
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**Key literature references and sources for data used to compile the SDS**

U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Issuing Date** 16-Sep-2022

**Revision date** 15-May-2025

**Revision Note** Updated format. Change in the mixture classification. SDS sections updated: 2, 5, 7, 10, 11, 14.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**