



# Safety Data Sheet

Issue Date: 05-Mar-2024

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Version 1

## 1. IDENTIFICATION

### Product identifier

**Product Name** Armory

### Other means of identification

**SDS #** ADAMA-365-CA

**Synonyms** None

**Registration Number(s)** Pest Control Reg. No. 35141

**UN/ID No** UN1760

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

**Recommended Use** Herbicide

**Uses Advised Against** No information available

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

#### Initial supplier identifier

ADAMA Agricultural Solutions Canada Ltd.  
300-191 Lombard Avenue  
Winnipeg, Manitoba R3B 0X1  
1-855-264-6262

### Emergency telephone number

**Emergency Telephone** For fire, spill and/or leak contact INFOTRAC:  
1-800-535-5053 (North America) 1-352-323-3500 (International)  
For medical emergencies and health/safety inquiries, contact ProPharma Group:  
1-877-250-9291

## 2. HAZARDS IDENTIFICATION

**Appearance** Dark brown liquid

**Physical state** Liquid

**Odour** Odourless

### Classification

|   |            |
|---|------------|
| Acute toxicity - Oral                                     | Category 4 |
| Acute toxicity - Inhalation (Dusts/Mists)                 | Category 3 |
| Serious eye damage/eye irritation                         | Category 2 |
| Specific target organ toxicity (STOT) — single exposure   | Category 3 |
| Specific target organ toxicity (STOT) — repeated exposure | Category 1 |
| Corrosive to Metals                                       | Category 1 |

**Signal word****Danger****Hazard statements**

Harmful if swallowed

Toxic if inhaled

Causes serious eye irritation

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure

May be corrosive to metals

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Wear eye/face protection

Do not breathe dust/fume/gas/mist/vapours/spray

Keep only in original packaging

**Precautionary Statements - Response**

Get medical advice/attention if you feel unwell

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/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Call a POISON CENTER or doctor

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

Rinse mouth

Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Store in corrosion resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### 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 | 37.3001  | -  | -   |

### 4. FIRST AID MEASURES

#### Description of first aid measures

|                       |   |
|-----------------------|---|
| <b>General advice</b> | Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician.  |
| <b>Eye contact</b>    | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.                                  |
| <b>Skin contact</b>   | Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a doctor. Wash contaminated clothing before reuse.           |
| <b>Inhalation</b>     | Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a doctor or poison control centre immediately. |
| <b>Ingestion</b>      | S46 - If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.   |

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

|                 |   |
|-----------------|---|
| <b>Symptoms</b> | Inflammation of the mouth, throat and esophagus. Gastrointestinal discomfort. Diarrhea. |
|-----------------|---|

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

|                        |   |
|------------------------|---|
| <b>Note to doctors</b> | Administer either activated charcoal (100g for adults or 2g/kg body weight in children) or Fuller's Earth (15% solution: 1 liter for adults or 15ml/kg body weight in children). NOTE: The use of gastric lavage without administration of an adsorbent has not shown any clinical benefit. Eye contact: - Severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should continue until complete healing has occurred. |
|------------------------|---|

### 5. FIREFIGHTING MEASURES

|  |  |
|--|--|
| <b>Suitable Extinguishing Media</b>    | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.            |
| <b>Small Fire</b><br><b>Large Fire</b> | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.<br>Alcohol-resistant foam or water spray. |

|   |   |
|---|---|
| <b>Unsuitable extinguishing media</b>                 | Do not use a solid water stream as it may scatter and spread fire.  |
| <b>Specific hazards arising from the chemical</b>     | As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.   |
| <b>Explosion Data</b>                                 |   |
| <b>Sensitivity to Mechanical Impact</b>               | None.   |
| <b>Sensitivity to Static Discharge</b>                | None.   |
| <b>Special protective equipment for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Do not allow run-off from fire-fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray. |

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

|                             |  |
|-----------------------------|--|
| <b>Personal precautions</b> | Ensure adequate ventilation.                             |
| <b>Other Information</b>    | Refer to protective measures listed in sections 7 and 8. |

### Environmental precautions

|                                  |   |
|----------------------------------|---|
| <b>Environmental precautions</b> | Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. |
|----------------------------------|---|

### 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>         | Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water. |
| <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> | Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8. Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel, stainless steel or fiberglass. |
|--------------------------------|--|

### Conditions for safe storage, including any incompatibilities

|                               |   |
|-------------------------------|---|
| <b>Storage Conditions</b>     | No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. |
| <b>Incompatible materials</b> | Aluminium Mild steel Iron   |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Limits

| Chemical name               | Canada - Alberta -<br>Occupational Exposure<br>Limits - Ceilings | Canada - British<br>Columbia -<br>Occupational Exposure<br>Limits - Ceilings | Canada - Ontario -<br>Occupational Exposure<br>Limits - Ceilings | Quebec |
|-----------------------------|--|--|--|--------|
| Diquat dibromide<br>85-00-7 | TWA: 0.5 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup>         | TWA: 0.5 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup>                     | TWA: 0.5 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup><br>Skin |        |

### Appropriate engineering controls

#### Engineering controls

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL. Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

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

#### Eye/face protection

Tightly fitting safety goggles. Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

#### Hand protection

Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The breakthrough time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

#### Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. Remove and wash contaminated clothing before re-use. Wear as appropriate: Impervious clothing.

#### Respiratory protection

When workers are facing concentrations above the exposure limit, they must use appropriate certified respirators. Suitable respiratory equipment: Respirator with a half face mask. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

#### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                 |                   |
|-----------------|-------------------|
| Physical state  | Liquid            |
| Appearance      | Dark brown liquid |
| Colour          | Dark brown        |
| Odour           | Odourless         |
| Odour Threshold | Not determined    |

| <u>Property</u>                         | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH                                      | 4-6               |                         |
| Melting point / freezing point          | No data available |                         |
| Initial boiling point and boiling range | No data available |                         |
| Flash point                             | No data available |                         |
| Evaporation Rate                        | Not determined    |                         |
| Flammability (Solid, Gas)               | Not determined    |                         |
| Flammability Limit in Air               |                   |                         |
| Upper flammability or explosive limits  | No data available |                         |

| <u>Property</u>                        | <u>Values</u>                  | <u>Remarks • Method</u> |
|--|--------------------------------|-------------------------|
| Lower flammability or explosive limits | No data available              |                         |
| Vapour Pressure                        | Not determined                 |                         |
| Vapour Density                         | No data available              |                         |
| Relative Density                       | 1.202 g/cm <sup>3</sup> (25°C) |                         |
| Water Solubility                       | Soluble in water               |                         |
| Solubility in other solvents           | Not determined                 |                         |
| Partition Coefficient                  | Not determined                 |                         |
| Autoignition temperature               | >650 °C                        |                         |
| Decomposition temperature              | Not determined                 |                         |
| Kinematic Viscosity                    | Not determined                 |                         |
| Dynamic Viscosity                      | Not determined                 |                         |
| Explosive properties                   | Not determined.                |                         |
| Oxidising properties                   | Not determined.                |                         |

| <u>Other information</u> |                   |
|--------------------------|-------------------|
| Softening Point          | Not determined    |
| Molecular weight         | Not determined    |
| VOC content              | No data available |
| Liquid Density           | Not determined    |
| Bulk density             | Not determined    |

## 10. STABILITY AND REACTIVITY

|                                    |   |
|------------------------------------|---|
| Reactivity                         | See section "Possibility of hazardous reactions". |
| Chemical stability                 | Stable under normal conditions.                   |
| Possibility of hazardous reactions | Corrosive in contact with metals.                 |
| Conditions to Avoid                | No decomposition if used as directed.             |
| Incompatible materials             | Aluminium. Mild steel. Iron.                      |
| Hazardous decomposition products   | None known based on information supplied.         |

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

|                     |                          |
|---------------------|--------------------------|
| <b>Eye contact</b>  | Avoid contact with eyes. |
| <b>Skin contact</b> | Avoid contact with skin. |
| <b>Inhalation</b>   | Toxic if inhaled.        |
| <b>Ingestion</b>    | Harmful if swallowed.    |

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

**Symptoms** Please see section 4 of this SDS for symptoms.

#### Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

|                                      |          |
|--------------------------------------|----------|
| <b>ATEmix (oral)</b>                 | 1,340.50 |
| <b>ATEmix (dermal)</b>               | >5000    |
| <b>ATEmix (inhalation-dust/mist)</b> | >0.5     |

**Unknown acute toxicity** No information available

#### Component Information

| Chemical name               | Oral LD50           | Dermal LD50            | Inhalation LC50 |
|-----------------------------|---------------------|------------------------|-----------------|
| Diquat dibromide<br>85-00-7 | = 214 mg/kg ( Rat ) | 50 - 100 mg/kg ( Rat ) | -               |

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

**Serious eye damage/eye irritation** Causes serious eye irritation.

**STOT - single exposure** May cause respiratory irritation.

**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

**Persistence/Degradability** No information available.

**Bioaccumulation** No information available.

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

#### Waste Treatment Methods

**Waste from residues/unused products** Refer to the product label for specific disposal/recycling information Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

**Contaminated packaging**

Refer to the product label for specific disposal/recycling information. Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

## 14. TRANSPORT INFORMATION

**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances

**DOT**

**UN/ID No** UN1760  
**Proper Shipping Name** Corrosive liquid, n.o.s. (Diquat dibromide)  
**Transport hazard class(es)** 8  
**Packing Group** III

**TDG**

**UN/ID No** UN1760  
**Proper Shipping Name** Corrosive liquid, n.o.s. (Diquat dibromide)  
**Transport hazard class(es)** 8  
**Packing Group** III

**MEX**

**UN/ID No** UN1760  
**Proper Shipping Name** Corrosive liquid, n.o.s. (Diquat dibromide)  
**Transport hazard class(es)** 8  
**Packing Group** III

**IATA**

**UN number or ID number** UN1760  
**Proper Shipping Name** Corrosive liquid, n.o.s. (Diquat dibromide)  
**Transport hazard class(es)** 8  
**Packing group** III

**IMDG**

**UN number or ID number** UN1760  
**Proper Shipping Name** Corrosive liquid, n.o.s. (Diquat dibromide)  
**Transport hazard class(es)** 8  
**Packing Group** III

## 15. REGULATORY INFORMATION

**REGULATORY INFORMATION****International Regulations**

**Ozone-depleting substances (ODS)** Not applicable

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

**The Rotterdam Convention** Not applicable

**International Inventories**

| Chemical name | TSCA | DSL/NDL | EINECS/ELI<br>NCS | ENCS | IECSC | KECL | PICCS | AIIC |
|---------------|------|---------|-------------------|------|-------|------|-------|------|
|               |      |         |                   |      |       |      |       |      |



|                  |   |   |   |   |   |   |   |  |
|------------------|---|---|---|---|---|---|---|--|
| Diquat dibromide | X | X | X | X | X | X | X |  |
|------------------|---|---|---|---|---|---|---|--|

**Legend:****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION****NFPA**  
**HMIS**Health hazards -  
Health hazards -Flammability -  
Flammability -Instability -  
Physical hazards -Special hazards -  
Personal Protection Not  
determined**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                                  |
|---------|----------------------------------|
| TWA     | TWA (time-weighted average)      |
| STEL    | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value              |
| *       | Skin designation                 |

**Revision Date:** 05-Mar-2024**Revision Note:** New format.**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**