



DriFast Desiccant Safety Data Sheet

Issue Date: 2019-05-29

Supersedes Date: 2018-08-08

1. Identification

Product Name: DriFast Desiccant

PCP Registration No.: 32648

Refer to the approved product label for handling and use instructions.

Product Type: Herbicide

Supplier: Nufarm Agriculture Inc.
5101, 3333 – 96th Ave NE
Calgary, Alberta, T3K 0S3, Canada
1-800-868-5444

Telephone Numbers: 24 Hour Emergency Response Number, Chemtrec, 1-800-424-9300.
For medical emergencies, ProPharma Group, 1-877-325-1840.
For product and use information, Nufarm Agriculture Inc.,
1-800-868-5444.

2. Hazard Identification

Classified according to UN GHS Version 5.

Physical Hazards:

Corrosive to Metals Category 1

Health Hazards:

Acute toxicity (Oral) Category 4

Acute toxicity (Inhalation) Category 3

Eye Irritation Category 2B

Specific Target Organ Toxicity (STOT) Single Exposure Category 3

Specific Target Organ Toxicity (STOT) Repeated Exposure Category 1

Environmental Hazards:

Aquatic Acute Toxicity Category 1

Aquatic Chronic Toxicity Category 1

Signal Word:

DANGER

Hazard Statements:

H290 – May be corrosive to metals.

H302 – Harmful if swallowed.

H320 – Causes eye irritation.

H331 – Toxic if inhaled.

H335 – May cause respiratory irritation.

H372 – Causes damage to organs through prolonged or repeated exposure.

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H400+H410 – Very toxic to aquatic life with long lasting effects.



Precautionary Statements:

Prevention: P102 – Keep out of reach of children.
 P234 – Keep only in original packaging.
 P260 – Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 – Wash thoroughly after handling.
 P270 – Do not eat, drink or smoke when using this product.
 P271 – Use only outdoors or in a well-ventilated area.
 P273 – Avoid release to the environment.
 P280 – Wear protective gloves/protective clothing/eye protection/face protection.

Response: P301+P312 – IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P311 – Call a POISON CENTER/doctor if exposed.
 P314 – Get medical advice/attention if you feel unwell.
 P321 – Specific treatment: See Section 4 of this SDS.
 P330 – Rinse mouth.
 P337+P313 – If eye irritation persists: Get medical advice/attention.
 P390 – Absorb spillage to prevent material damage.
 P391 – Collect spillage.

Storage: P403+P233 – Store in a well ventilated place. Keep container tightly closed.
 P405 – Store locked-up.
 P406 – Store in a corrosion resistant plastic, plastic-lined steel, stainless steel or fiberglass container.

Disposal: P501 – Dispose of contents/container to an approved waste disposal plant.

3. Composition / Information on Ingredients

Hazardous Components	CAS No.	Wt. %
6,7-dihydrodipyrido(1,2-a-2'-1'-c)pyrazinedium dibromide	85-00-7	37.4
Chemical Synonyms: Diquat dibromide		

Other ingredients are considered non-hazardous.

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Content as Expressed on Product Label
Diquat ion (present as dibromide)... 240 g/L

4. First Aid Measures

If swallowed, call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If in eyes, immediately 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 centre 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 centre or doctor for further treatment advice.

5. Fire-fighting Measures

Extinguishing Media: Use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist. Cool closed containers exposed to fire with water spray. Do not use a solid water stream as it may scatter and spread the fire.

Special Firefighting Procedures: Wear full protective clothing and self-contained breathing apparatus. Evacuate non-essential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water run-off can cause environmental damage. Contain run-off water with, for example, temporary earth barriers.

Flash Point:..... N/A

Conditions of Flammability: N/A

Hazardous Decomposition Products: Flammable hydrogen gas may be formed on contact with aluminum. If the concentrate is spilled and allowed to stand, it can dry to a highly irritating dust. Can decompose at high temperatures forming toxic gases. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 2 Flammability: 1 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Control the spill at its source. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Use adequate ventilation and equipment and wear clothing as described in Section 8 and/or the product label.

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Environmental Precautions: Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Spillages or uncontrolled discharges into watercourses must be reported to the appropriate regulatory body.

Methods and Materials for Containment and Cleaning Up: Pump or scoop large amounts of liquid into a disposable container. Absorb remaining liquid or smaller spills with clay, sand or vermiculite. Scoop or seep up material and place into a disposal container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into a compatible disposal container. On soils, small amounts will naturally decompose. For large amounts, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal.

7. Handling and Storage

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. Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel, stainless steel or fiberglass.

If the concentrate is spilled and allowed to stand, it can dry to a highly irritating dust.

KEEP OUT OF REACH OF CHILDREN. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Avoid breathing vapours, dust or spray mist. Wear full protective clothing and equipment (see Section 8). After work, rinse gloves and remove protective equipment, and wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, applying cosmetics or using the toilet. Wash contaminated clothing before re-use and separate from household laundry. Keep containers closed when not in use. Protect product, wash or rinse water, and contaminated materials from uncontrolled release into the environment, or from access by animals, birds or unauthorized people.

Storage: Store in original container in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 40 °C. Refer to the product label for specific storage recommendations, including minimum storage temperature and freeze/thaw stability. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

8. Exposure Controls / Personal Protection

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. CONSULT THE PRODUCT LABEL FOR COMMERCIAL AND/OR ON-FARM APPLICATIONS.

Engineering Controls: If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV (threshold limit value). Warehouses, production areas, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

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Exposure Guidelines:

Component	TWA*	STEL**	Reference/Note
Diquat dibromide	0.5 mg/m ³	0.08 mg/m ³ (AB/BC/ON/QC) 0.1 mg/m ³	

*Time-weighted Average, 8-hour unless otherwise noted.

**Short Term Exposure Limit

Refer to approved product label for additional exposure control guidance.

9. Physical and Chemical Properties

NOTE: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

Appearance: Dark brown liquid.

Formulation Type: Solution concentrate.

Physical State: Liquid.

Odour: Odourless.

Odour Threshold: Not available.

pH: 4 - 6

Melting Point: Not applicable.

Freezing Point: - 7 °C.

Initial Boiling Point and Boiling Range: Not available.

Flash Point: Not available.

Evaporation Rate: Not available.

Flammability (solid/gas): Not applicable.

Lower Explosive Limit: Not applicable.

Upper Explosive Limit: Not applicable.

Vapour Pressure: Diquat dibromide: 7.50 x 10⁻⁸ mmHg @ 20 °C.

Vapour Density: Not available.

Relative Density: 1.20 g/mL @ 20 °C.

Solubility(ies): Diquat dibromide: Miscible @ 20 °C, pH 7 (water).

Partition Coefficient (n-octanol water): Diquat dibromide: - 4.6

Auto-Ignition Temperature: Not available.

Decomposition Temperature: Not available.

Viscosity: 2.3 cps @ 20 °C.

10. Stability and Reactivity

Reactivity: Not reactive.

Chemical Stability: Stable under normal use and storage conditions.

Possibility of Hazardous Reactions: This product reacts with aluminum to produce flammable hydrogen gas. If the concentrate is spilled and allowed to stand, it can dry to a highly irritating dust.

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Conditions to Avoid: Do not mix or store in containers or systems made of aluminum or having aluminum fittings. Spray solutions should not be mixed, stored, or applied in containers other than plastic, plastic-lined steel, stainless steel or fiberglass.

Incompatible Materials: Corrosive to aluminum. Strong alkalis and anionic wetting agents (e.g. alkyl and alkylaryl sulfonates).

Hazardous Decomposition Products: Flammable hydrogen gas may be formed on contact with aluminum. Can decompose at high temperatures forming toxic gases. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

11. Toxicological Information

Likely routes of exposure: Dermal, inhalation, oral.

Eye contact: Mildly Irritating (Rabbit)

Skin contact: Slightly Irritating (Rabbit)

Ingestion: Moderately Acutely Toxic

Inhalation: Slightly Acutely Toxic

Medical Conditions Aggravated by Exposure: Not applicable.

Toxicological Data: To be effective, treatment for ingestion of the product must begin IMMEDIATELY.

If swallowed, give adsorbent suspension, for example either activated charcoal (100 g for adults or 2 g/kg body weight for children) or bentonite clay (100 to 150 g for adults or 2 g/kg body weight for children), mixed with a purgative (MgSO₄, Na₂SO₄ or mannitol). Maintain and monitor electrolyte and fluid status daily. Consider haemodialysis or haemoperfusion using charcoal column.

If in eyes, treat symptomatically, using antibiotics and steroids as necessary. Symptoms may develop gradually. Severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should continue until complete healing has occurred.

The use of supplemental oxygen is contraindicated. Do not administer supplemental oxygen unless the patient develops severe hypoxemia.

Acute oral LD₅₀ (mg/kg) 886 mg/kg body weight (female rat)

Acute dermal LD₅₀ (mg/kg) > 5050 mg/kg body weight (rat)

Acute inhalation LC₅₀ (mg/l) > 0.62 mg/L air – 4 hours

Skin corrosion/irritation Slightly Irritating (Rabbit)

Serious eye damage/irritation Mildly Irritating (Rabbit)

Respiratory or skin sensitization ... Not a Sensitizer (Guinea Pig)

Germ cell mutagenicity Did not show mutagenic effects in animal experiments.

Carcinogenicity Did not show carcinogenic effects in animal experiments.

Reproductive toxicity Did not show reproductive toxicity effects in animal experiments.

12. Ecological Information

Ecotoxicity:

Diquat dibromide:

Invertebrates (Water Flea) 48-hour LC₅₀/EC₅₀ 1.2 ppm

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Fish (Rainbow Trout) 96-hour LC50/EC50 6.1 ppm

Birds (5-day dietary – Mallard Duck) LC50/EC50 1,570 ppm

Persistence and Degradability:

Diquat dibromide: Persistent in soil. Persistent in water; partitions to sediment.

Mobility in Soil:

Diquat dibromide: Low mobility in soil.

Bioaccumulation Potential:

Diquat dibromide: BCF < 500; does not bioaccumulate.

13. Disposal Considerations

Do not reuse containers unless they are specifically designed to be refillable. Empty container retains product residue. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

14. Transport Information

Canadian TDG Description (Road & Rail):

UN 2927, TOXIC LIQUID, CORROSIVE, ORGANIC, n.o.s
(DIQUAT DIBROMIDE), 6.1, (8), II

United States DOT Description:

UN 2927, TOXIC LIQUID, CORROSIVE, ORGANIC, n.o.s
(DIQUAT DIBROMIDE), 6.1, (8), II

15. Regulatory Information

Pest Control Products Act Registration Number: 32648

OPAC Schedule: 3

Read the approved label, authorized under the *Pest Control Products Act*, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the *Pest Control Products Act*. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label:

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WARNING POISON
CAUTION – SKIN AND EYE IRRITANT

WHMIS exempt.

16. Other Information

This Safety Data Sheet (SDS) is designed to comply with the Globally Harmonized System (GHS) of classification, and the *Hazardous Products Regulations*.

This SDS 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. The product labeling provides that information specifically for product use as intended.

Company and published information is used in the development of this SDS. The information herein is presented in good faith and believed accurate at the date of publication. However, no warranty, expressed or implied, is given.

Revisions to the last issue: TDG and DOT fixed.

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