

SAFETY DATA SHEET

1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Bolster II Desiccant
Pest Control Product Number:	33743
Product Use:	Agrochemicals/Herbicide
Manufacturer /Supplier:	INTERPROVINCIAL COOPERATIVE LTD. 945 Marion St. Winnipeg, Manitoba R2J 0K7 1-204-233-3461 <u>www.ipco.ca</u>
Emergency Phone:	CANUTEC: 1-888-CAN-UTEC (226-8832), 613-996-6666 or *666 on a cellular phone.
Effective Date:	March 05, 2025
	This product is regulated under authority of the Pest Control Products Act
2: HAZARD IDENTIFICATION	

	GHS classification in accordance with the Hazardous Products Regulations
Acute Toxicity (Inhalation)	Category 3
Acute Toxicity (Oral)	Category 4
Corrosive to Metals	Category 1
Eye Irritation	Category 2A
Specific Target Organ Toxicity (STOT) Single Exposure	Category 3 (Respiratory System)
Specific Target Organ Toxicity (STOT) Repeated Exposure	Category 1 (Eyes)

Pictograms:

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Signal word:	Danger
Hazard statements:	May be corrosive to metals. Harmful if swallowed. Causes eye irritation. Toxic if inhaled. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure.
Precautionary statement:	Keep only in original packaging. Do not breathe
	dust/fume/gas/mist/vapours/spray.Wash 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 if you feel unwell.
	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. Call a POISON CENTER/doctor if inhaled. Call a POISON CENTER/doctor if you feel unwell. Specific treatment: See Section 4 of this SDS. Rinse mouth. If eye irritation persists: Get medical advice/attention. Absorb spillage to prevent material damage.
Other hazards:	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container to an approved waste disposal plant. None known
In case of emergency call CA	NUTEC at 613-996-6666

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3: COMPOSITION AND INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture **Components**:

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
diquat dibromide	diquat dibromide	85-00-7	37.3001

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4: FIRST AID MEASURES		
General:	Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.	
Inhalation:	Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control center immediately.	
Skin contact:	Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.	
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.	
Ingestion:	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:	Inflammation of the mouth, throat and esophagus. Gastrointestinal discomfort. Diarrhea.	
Note to physician:	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: FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Extinguishing media - small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
	Extinguishing media - large fires: Alcohol-resistant foam or Water spray.
Unsuitable extinguishing media:	Do not use a solid water stream as it may scatter and spread the fire.
Specific hazards arising from the product:	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.
Further information:	Do not allow run-off from firefighting to enter drains or water courses.
	Cool closed containers exposed to fire with water spray.
Special Protective equipment and Precautions for firefighters:	Wear full protective clothing and self-contained breathing apparatus.

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6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions:	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 materials for containment and clean up:	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 the contaminated surface thoroughly. Clean with detergents. Avoid solvents.
	Retain and dispose of contaminated wash water.
7: HANDLING AND STORAGE	

1. HANDEING AND STONAGE	
Advice on safe handling:	Avoid contact with skin and eyes. When using it 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:	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 stuff.

8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters:

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
diquat dibromide	85-00-7	TWA (Total)	0.5 mg/m3	CA AB OEL
		TWA (Respirable)	0.1 mg/m3	CA AB OEL
		TWA	0.5 mg/m3	CA ON OEL
		TWA (Respirable fraction)	0.1 mg/m3	CA ON OEL
		TWA (Inhalable particulate matter)	0.5 mg/m3 (the cation)	ACGIH
		TWA (Respirable particulate matter)	0.1 mg/m3 (the cation)	ACGIH

Engineering measures:

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDEDFOR 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.

Personal protective equipment:	
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.
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.
Eye protection:	Tightly fitting safety goggles. Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Skin and body protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use. Wear as appropriate: Impervious clothing
Protective measures:	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Dark brown
Odor:	Odorless
Odor Threshold:	No data available
pH:	4-6
Melting point/range:	Not applicable
Boiling point/range:	No data available
Flash point:	Method: Pensky-Martens closed cup
	does not flash
Evaporation rate:	No data available
Flammability (solid/gas):	Not applicable
Upper explosive limit/Upper flammability limit:	Not applicable
Lower explosive limit/Lower flammability limit:	Not applicable
Vapour pressure:	No data available
Vapour Density:	No data available
Relative vapor density:	No data available
Density:	1.202 g/cm3 (25 °C)
Solubility(ies):	

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Water solubility:	No data available
Solubility in other solvents:	Soluble
Partition Coefficient (n-octanol water):	No data available
Auto ignition temperature:	> 650 °C
Decomposition temperature:	No data available
Viscosity, kinematic:	No data available
Oxidizing properties:	The substance or mixture is not classified as oxidizing
Particle size:	No data available

10: STABILITY AND REACTIVITY

Reactivity: Chemical Stability: Possibility of hazardous reactions:	See section "Possibility of hazardous reactions". Stable under normal conditions. Corrosive in contact with metals.
Conditions to avoid:	No decomposition if used as directed.
Incompatible Materials:	Aluminum.
	Mild steel.
	Iron.
Hazardous decomposition products:	No hazardous decomposition products are known.

11: TOXICOLOGICAL INFORMATION

Likely routes of exposure:	Ingestion. Inhalation. Skin contact. Eye contact.
Acute Toxicity:	
Product:	
Acute oral toxicity:	LD50 (Rat, female): 886 mg/kg
Acute inhalation toxicity:	Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
	Acute toxicity estimate: 0.6059 mg/l Exposure time: 4 h
	Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity:	LD50 (Rat, male and female): > 5,050 mg/kg
Components:	
<u>Diquat dibromide:</u>	
Acute oral toxicity:	LD50 (Rat, female): 399.75 mg/kg
	Remarks: Lethal dose for man is approximately 4-6g of diquat (equivalent to approximately 60mg/kg). May cause nausea, vomiting, abdominal pain and diarrhea within a few hours of swallowing. Ulceration of lips, mouth, throat and intestine may follow within 24-48 hours. Kidney failure and liver damage may occur; in severe cases circulatory collapse; coma or death/cardiac arrest.
Acute inhalation toxicity:	LC50 (Rat, male): 0.226 mg/l Exposure time: 4 h
	Test atmosphere: dust/mist
	LD50 (Rat, male and female): > 792 mg/kg
	Assessment: The substance or mixture has no acute dermal toxicity
Skin corrosion/irritation:	
Product:	
Species:	Rabbit

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Result:	No skin irritation
Components:	
Diquat dibromide:	
Species:	Rabbit
Result:	Irritating to skin.
Remarks:	Expert judgement. May also cause discoloration, cracking and loss of nails. Nor- mal growth follows without delay.
Serious eye damage/eye irritation:	Did not show carcinogenic effects in animal experiments.
Product:	
Species:	Rabbit
Result:	Eye irritation
Remarks:	Expert judgement. This material has a delayed eye irritation effect. May lead to ulceration of cornea and conjunctival epithelium giving rise to secondary infection. Although healing may be slow, the injury is superficial and with proper medical care recovery will be complete, even in severe cases.
Respiratory or skin sensitization:	
Species:	Guinea pig
Result:	May cause sensitization by skin contact.
Germ cell mutagenicity:	
Components:	
Diquat dibromide:	
Germ cell mutagenicity -	Animal testing did not show any mutagenic effects
Assessment:	
Carcinogenicity:	
Components:	
Diquat dibromide:	
Carcinogenicity – Assessment:	No evidence of carcinogenicity in animal studies.
Reproductive toxicity:	
<u>Components:</u>	
<u>Diquat dibromide:</u>	
Reproductive toxicity – Assessment:	No toxicity to reproduction
STOT - single exposure:	
<u>Components:</u>	
<u>Diquat dibromide:</u>	
Assessment:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.
STOT - repeated exposure:	
Components:	
Diquat dibromide:	
Target Organs:	Eyes
Assessment:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.
Remarks:	Ocular effects (cataracts) have been reported following long term oral exposure of
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laboratory animals.

12: ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:	
Product:	
Toxicity to fish:	LC50 (Pimephales promelas (fathead minnow)): 65.43 mg/l
-	Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia similis (water flea)): 0.59 mg/l
Toxicity to algae/aquatic plants:	Exposure time: 48 h EC50 (Raphidocelis subcapitata (freshwater green alga)): 0.13 mg/l Exposure time: 72 h NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.025 mg/l Exposure time: 72 h
Mobility in soil:	
Components:	Low mobility in soil.
Diquat dibromide:	
Toxicity to fish:	LC50 (Oncorhynchus mykiss (rainbow trout)):
	Calculated 10.46 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): Calculated 2.49 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants:	ErC50 (Navicula pelliculosa (Freshwater diatom)): Calculated 0.001148 mg/l Exposure time: 96 h
	NOEC (Navicula pelliculosa (Freshwater diatom)): Calculated 0.0005945 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity):	NOEC (Pimephales promelas (fathead minnow)): Calculated 0.04726 mg/l Exposure time: 34 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC (Daphnia magna (Water flea)): Calculated 0.0504 mg/l Exposure time: 21 d
Persistence and degradability: <u>Components:</u> <u>Diquat dibromide:</u> Stability in water:	Degradation half-life: > 30 d Remarks: Persistent in water.
Bio accumulative potential:	
<u>Components:</u>	
<u>Diquat dibromide:</u>	
Bioaccumulation:	Remarks: Low bioaccumulation potential.
Mobility in Soil:	
Components:	
Diquat dibromide:	
Distribution among	
environmental compartments	Remarks: immobile
Stability in soil:	Dissipation time: 11 - 41 y Percentage dissipation: 50 % (DT50) Remarks: Persistent in soil.

Other adverse effects:	
Components:	
<u>Diquat dibromide:</u>	
Results of PBT and vPvB	This substance is not considered to be persistent, bioaccumu- lating and toxic
assessment:	(PBT). This substance is not considered to be very persistent and very
	bioaccumulating (vPvB).
13: DISPOSAL CONSIDERATION	NS
Waste from residue:	Refer to the product label for specific disposal/recycling information
	Do not contaminate ponds, waterways or ditches with chemical or used containers.
	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	
International Regulations;	
<u>UNRTDG</u> :	
UN Number:	UN 1760
Proper Shipping Name:	CORROSIVE LIQUID, N.O.S. (DIQUAT DIBROMIDE)
Class:	8
Packing Group:	III
Labels:	8
Environmentally hazardous:	no
IMDG-Code	
UN Number:	UN 1760
Proper Shipping Name:	CORROSIVE LIQUID, N.O.S. (DIQUAT DIBROMIDE)
Transport Hazard Class:	Class 8
Packing Group:	III
Labels:	8
EmS:	F-A, S-B
Marine pollutant:	yes
IATA-DGR:	
UN Number:	UN 1760
Proper Shipping Name:	CORROSIVE LIQUID, N.O.S. (DIQUAT DIBROMIDE)
Transport Hazard Class:	Class 8
•	
Packing Group:	
Labels:	Corrosive
Packing instruction (cargo aircraft):	856
Packing instruction (passenger aircraft):	852

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Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable for product as supplied
National Regulations:	
<u>TDG</u> :	
UN Number:	UN 3265
Proper Shipping Name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S (DIQUAT DIBROMIDE)
Class:	8
Packing Group:	III
Labels:	8
ERG Code:	153
Marine pollutant:	Yes (DIQUAT DIBROMIDE)
Special precautions for user:	The transport classification(s) provided herein are for informational purposes only and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15: REGULATORY INFORMATION

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

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. The following is the hazard information required on the pest control product label: Warning Skull and crossbones poison Eye irritant Skin irritant

The components of this product are reported in the following inventories:

DSL: All components of this product are on the Canadian DSL

Canadian lists: No substances are subject to a Significant New Activity Notification.

16: OTHER INFORMATION	
Full text of other abbreviations:	ACGIH: USA. ACGIH Threshold Limit Values (TLV)
	CA AB OEL: Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	CA ON OEL: Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
	ACGIH / TWA : 8-hour, time-weighted average
	CA AB OEL / TWA: 8-hour Occupational Exposure Limit
	CA ON OEL / TWA: Time-Weighted Average Limit (TWA)
	AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardization; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x%
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growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IC50 - Half maximal inhibitory concentration; ICAO -International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD -Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bio accumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH -Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bio accumulative; WHMIS - Workplace Hazardous Materials Information System.

Revision Date/Reason: Notice: March 05, 2025/Section 14 updated

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