SAFETY DATA SHEET

PRODUCT NAME **Imtrade Diquat 200 Non-Residual Herbicide**

APVMA Product Code: 58411

1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	**IMTRADE AUSTRALIA PTY LTD**
Address	17 Ocean Street, Kwinana, Western Australia, AUSTRALIA, 6167
Telephone	1800 171 799
Fax	1800 171 788
Emergency	In a Transport Emergency Dial 000 – Police or Fire Brigade
Web site	http://www.imtrade.com.au
Product Use:	Agricultural herbicide for use as described on the product label.
Creation Date:	**March, 2008**
This version issued:	**April, 2026** and is valid for 5 years from this date.

Poisons Information Centre: Phone 13 1126 from anywhere in Australia

Product type: Diquat is a pyridine-bipyridyl derivative.

SECTION 2 - HAZARDS IDENTIFICATION

Statement of Hazardous Nature

SUSMP Classification: S6

ADG Classification: Class 8: Corrosive Substances.

UN Number: 1760, CORROSIVE LIQUID, N.O.S. (contains DIQUAT)

GHS Signal word: DANGER.

Skin Corrosion/Irritation - Category 1
Skin Sensitisation - Category 1
Acute Toxicity Inhalation - Category 3
Specific Target Organ Toxicity - Single Exposure - Category 3
Specific Target Organ Toxicity - Repeated Exposure - Category 2
Hazardous to Aquatic Environment (Chronic) - Category 1

HAZARD STATEMENTS:

H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H331: Toxic if inhaled.
H335: May cause respiratory irritation.
H372: Causes damage to organs through prolonged or repeated exposure.
H410: Very toxic to aquatic life with long-lasting effects.

PRECAUTIONARY STATEMENTS:

PREVENTION

P102: Keep out of reach of children.
P260: Do not breathe fumes, mists, vapours or spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash contacted areas thoroughly after handling.
P271: Use only outdoors or in a well ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves, protective clothing and eye or face protection.
P284: Wear respiratory protection.

RESPONSE

P310: Immediately call a POISON CENTER or doctor/physician.

P363: Wash contaminated clothing before reuse.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P332+P313: If skin irritation occurs: Get medical advice.
P333+P313: If skin irritation or rash occurs: Get medical advice.
P337+P313: If eye irritation persists: Get medical advice.
P391: Collect spillage.

STORAGE

P405: Store locked up.
P402+P404: Store in a dry place. Store in a closed container.
P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

Emergency Overview

Physical Description & Colour: Dark red brown viscous liquid.
Odour: Obnoxious odour.
Major Health Hazards: Diquat dibromide is toxic by ingestion and harmful in contact with skin. Irritating to eyes, and mildly irritating to skin. Ingestion of sufficient doses may cause severe irritation of the mouth, throat, oesophagus, and stomach, followed by nausea, vomiting, diarrhoea, severe dehydration, and alterations in body fluid balances, gastrointestinal discomfort, chest pain, diarrhoea, kidney failure, and toxic liver damage. Skin absorption of high doses may cause symptoms similar to those that occur following ingestion.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Conc,%	TWA (mg/m^3)	STEL (mg/m^3)
Diquat dibromide	85-00-7	200g/L	0.5	not set
Other non hazardous ingredients	secret	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

SECTION 4 - FIRST AID MEASURES

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: If inhalation occurs, contact a Poisons Information Centre. Urgent hospital treatment is likely to be needed. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
Skin Contact: Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.
Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.
Ingestion: If swallowed, do NOT induce vomiting; rinse mouth thoroughly with water and contact a Poisons Information Centre, or call a doctor at once. Give activated charcoal if instructed.

SECTION 5 - FIRE FIGHTING MEASURES

Fire and Explosion Hazards: There is little risk of an explosion from this product if commercial quantities are involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.
Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.
Extinguishing Media: Water fog or fine spray is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses.
Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is liquid-tight chemical protective clothing and breathing apparatus.
Flammability Class: Does not burn.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Wear full protective chemically resistant clothing including eye/face protection, gauntlets and self contained breathing apparatus. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).
Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Because of the corrosiveness of this product, special personal care should be taken in any cleanup operation. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

SECTION 7 - HANDLING AND STORAGE

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.
Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area. Check containers periodically for corrosion and leaks. Containers should be kept closed in order to minimise contamination. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 10000kg or L of Dangerous Goods of Packaging Group III, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits	**TWA (mg/m^3)**	**STEL (mg/m^3)**
Diquat dibromide	0.5	not set

The ADI for Diquat dibromide is set at 0.002mg/kg/day. The corresponding NOEL is set at 0.25mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, June 2013.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.
Ventilation: This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.
Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin Protection: If you believe you may have a sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being used.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

Physical Description & colour:	Dark red brown viscous liquid.
Odour:	Obnoxious odour.
Boiling Point:	Approximately 100°C at 100kPa.
Flash point:	Does not burn.
Upper Flammability Limit:	Does not burn.
Lower Flammability Limit:	Does not burn.
Autoignition temperature:	Not applicable - does not burn.
Freezing/Melting Point:	Approximately 0°C.
Volatiles:	Water component.
Vapour Pressure:	2.37 kPa at 20°C (water vapour pressure).
Vapour Density:	No data.
Specific Gravity:	Approx 1.20
Water Solubility:	Completely soluble in water.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data
Particle Characteristics:	Not applicable to liquids.

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: No particular incompatibilities.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Under no circumstances should the container be sealed. Keep isolated from combustible materials. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: No particular Incompatibilities.

Fire Decomposition: This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Water, bromine compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity: An information profile for Diquat dibromide is available at http://extoxnet.orst.edu/pips/ghindex.html

Acute toxicity: Test animals (rats, mice, guinea pigs, rabbits, dogs, cows, and hens) given lethal doses of Diquat dibromide showed a delayed pattern of illness, with onset approximately 24 hours following dosing, subsequent lethargy, pupil dilation, respiratory distress, weight loss, weakness and finally death over the course of 2 to 14 days after dosing. There have been reports of workers who have had softening and colour changes in one or more fingernails after contact with concentrated Diquat dibromide solutions. In some instances, the nail was shed, and did not grow in again. Several cases of severe eye injury in humans have occurred after accidental splashing. In each case, initial irritation was mild, but after several days, serious burns and sometimes scarring of the cornea developed. Direct or excessive inhalation of Diquat dibromide spray mist or dust may result in oral or nasal irritation, nosebleeds, headache, sore throat, coughing, and symptoms similar to those from ingestion of Diquat.

Chronic toxicity: Chronic effects of Diquat dibromide are similar to those of paraquat. Cataracts occurred in rats and dogs given 2.5 mg/kg/day and 5 mg/kg/day of Diquat dibromide, respectively. Cataracts increased in proportion to the dose given in test animals (cats and dogs). Chronic exposure is necessary to produce these effects. Rats fed dietary doses of 2.5 mg/kg/day over 2 years did not exhibit signs of toxicity other than reduced food intake and decreased growth. In another study using rats, oral doses of 4 mg/kg/day over 2 years produced no behavioural or other

changes in general condition. At this dose level no evidence of change in the kidneys, liver, or myocardium (heart muscle) were seen. This dosage (but not 2 mg/kg/day) caused changes in lung tissues. Repeated or prolonged dermal contact may cause inflammation of the skin, and, at high doses, systemic effects in other parts of the body. These may include damage to the kidneys. Chronic exposure may damage skin, which may increase the permeability of the skin to foreign compounds.

Reproductive effects: Diquat dibromide generally did not reduce fertility when tested in experimental animals. Based on the available evidence it is unlikely that Diquat dibromide will cause reproductive effects in humans under normal circumstances.

Teratogenic effects: No deformities were found in the unborn offspring of pregnant rats that were injected intraperitoneally with 0.5 mg/kg/day of Diquat daily during organogenesis, the stage of foetal development in which organs are formed. It is unlikely that Diquat dibromide will cause teratogenic effects in humans under normal circumstances.

Mutagenic effects: There is no evidence that Diquat dibromide causes permanent changes in genetic material.

Carcinogenic effects: Based on the evidence, it appears that Diquat dibromide is not carcinogenic.

Organ toxicity: In animals, Diquat dibromide may affect the gastrointestinal tract, eyes, kidneys or liver, and the lungs.

Fate in humans and animals: Absorption of Diquat dibromide from the gut into the bloodstream is low. Oral doses are mainly metabolized within the intestines, with metabolites being excreted in the faeces. Rat studies showed only a small percentage of the applied oral dose (6%) was absorbed into the bloodstream and then excreted in the urine.

Classification of Hazardous Ingredients

Ingredient	Health Hazard Statement Codes
Diquat Dibromide	H372, H319, H335, H315, H317, H410, H302, H330

- Specific Target Organ Toxicity (Repeated Exposure) – Category 1
- Eye Irritation – Category 2
- Skin Irritation – Category 2
- Skin Sensitisation – Category 1
- Hazardous to the Aquatic Environment (Acute) – Category 1
- Specific Target Organ Toxicity (Single Exposure) – Category 3
- Hazardous to the Aquatic Environment (Chronic) – Category 1
- Acute Toxicity (Inhalation) - Category 2
- Acute Toxicity (Ingestion) - Category 4

Potential Health Effects

Inhalation:

Short Term Exposure: Available data shows that this product is very toxic, see symptoms above. In addition product is an inhalation irritant. Symptoms may include headache, irritation of nose and throat and increased secretion of mucous in the nose and throat. Other symptoms may also become evident, but they should disappear after exposure has ceased.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: Classified as a potential sensitiser by skin contact. Exposure to a skin sensitiser, once sensitisation has occurred, may manifest itself as skin rash or inflammation, and in some individuals this reaction can be severe. In addition product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is toxic, see symptoms above. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: No significant ingredient is classified as carcinogenic by SWA.
NTP: No significant ingredient is classified as carcinogenic by NTP.
IARC: No significant ingredient is classified as carcinogenic by IARC.

SECTION 12 - ECOLOGICAL INFORMATION

This product may cause long term adverse effects to the aquatic environment.
Effects on birds: Diquat dibromide ranges from slightly to moderately toxic to birds. The reported acute oral LD_{50} in young male mallards is 564 mg/kg. The oral LD_{50} for Diquat dibromide is 200 to 400 mg/kg in hens. The 5-day dietary LC_{50} is about 1300 ppm in Japanese quail.
Effects on aquatic organisms: Diquat dibromide is moderately to practically nontoxic to fish and aquatic invertebrates. There is little or no bioconcentration of Diquat dibromide in fish.
Effects on other organisms: Diquat dibromide is not toxic to honey bees. Since Diquat dibromide is a nonselective herbicide, it may present a danger to non-target plant species.
Environmental Fate:
Breakdown in soil and groundwater: Diquat dibromide is highly persistent, with reported field half-lives of greater than 1000 days. It is very well sorbed by soil organic matter and clay. Although it is water soluble, its capacity for strong adsorption to soil particles suggest that it will not easily leach through the soil, be taken up by plants or soil microbes, or broken down by sunlight (photochemical degradation).
Breakdown in water: Studies on the erosion of Diquat-treated soils near bodies of water indicate that Diquat dibromide stays bound to soil particles, remaining biologically inactive in surface waters, such as lakes, rivers, and ponds. When Diquat dibromide is applied to open water, it disappears rapidly because it binds to suspended particles in the water. Diquat dibromide's half-life is less than 48 hours in the water column, and may be on the order of 160 days in sediments due to its low bioavailability.
Breakdown in vegetation: Diquat dibromide is rapidly absorbed into the leaves of plants, but usually kills the plant tissues necessary for translocation too quickly to allow movement to other parts of the plant. The herbicide interferes with cell respiration, the process by which plants produce energy.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 http://www.chemclear.com.au/ and for help with the disposal of empty drums, contact DrumMuster http://www.drummuster.com.au/ where you will find contact details for your area.

SECTION 14 - TRANSPORT INFORMATION

Dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

UN Number: 1760, CORROSIVE LIQUID, N.O.S. (contains DIQUAT)
Hazchem Code: 2X
Special Provisions: 223, 274
Limited quantities: ADG 7 specifies a Limited Quantity value of 5 L for this class of product.
Dangerous Goods Class: Class 8: Corrosive Substances.
Packing Group: III
Packing Instruction: P001, IBC03, LP01

Class 8 Corrosive Substances shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents), 5.2 (Organic Peroxides), 6 (Toxic Substances where the Toxic Substances are cyanides and the Corrosives are acids), 7 (Radioactive Substances), Foodstuffs and foodstuff empties. They may however be loaded in the same vehicle or packed in the same freight container with Classes 2.1 (Flammable Gases), 2.2 (Non-Flammable, Non-Toxic Gases), 2.3 (Poisonous Gases), 3 (Flammable liquids), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 6 (Toxic Substances except where the Toxic Substances are cyanides and the Corrosives are acids) and 9 (Miscellaneous Dangerous Goods).

SECTION 15 - REGULATORY INFORMATION

AIIC: All of the significant ingredients in this formulation are compliant with AICIS regulations.
The following ingredient: Diquat dibromide, is mentioned in the SUSMP.

SECTION 16 - OTHER INFORMATION

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)

AICS/AIIC	Australian Inventory of Industrial Chemicals
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

This SDS summarises our best knowledge of the health and safety hazard information on the product, and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact Imtrade Australia Pty Ltd, or in the event of an emergency, 000. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document “Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice” (July 2020) and GHS Revision 7

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End of Report