



NOVA AGRO (HK) LTD.
(Co. Reg. No. 1023146)
6th Floor Wyndham Place
44 Wyndham Street
CENTRAL HONG KONG

Material Safety Data Sheet (MSDS) MAGQUAT 200SL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Magquat 200SL
CAS#: 85-00-7
Chemical Name: Diquat dibromide
Chemical Formula: C₁₂H₁₂N₂Br₂
Use: Non-selective Herbicide
Supplied by: **NOVA AGRO (HK) LTD.**
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2. COMPOSITION AND INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Diquat dibromide (20%)	Not Established	0.5 mg/m ³ TWA (total dust) 0.08 mg/m ³ TWA (respirable dust)	0.5mg/m ³ TWA**	No

3. HAZARDS IDENTIFICATION

Most important hazards

Danger

H290: May be corrosive to metals.

H302: Harmful if swallowed.

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.

Other hazards

None known.



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4. FIRST AID MEASURES

General advice: Have the product container, label or Material Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

If inhaled: 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 centre immediately.

In case of 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.

In case of 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.

If swallowed: 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 oesophagus.

Gastrointestinal discomfort.

Diarrhoea.

Notes to physician: Administer either activated charcoal (100g for adults or 2g/kg body weight in children) or Fuller's Earth (15% solution; 1 litre 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

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 fire.

Specific hazards during firefighting: 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.

Specific extinguishing methods: Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.



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Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 8 and 9.

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 cleaning 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 contaminated surface thoroughly.

Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

7. HANDLING AND STORAGE

Advice on safe handling: Avoid contact with skin and eyes.

When using, do not eat, drink or smoke.

For personal protection see section 9.

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 feedstuffs.

Further information on storage stability: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures: 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.



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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/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection: No special protective equipment required.

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: No special protective equipment required.

Select skin and body protection based on the physical job requirements.

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

Colour: brown

Odour: odourless

pH: 6.4

Flash point: >103°C (1030 hPa) (Pensky-Martens closed cup)

Density: 1.1021g/ml

Auto-ignition temperature: >650°C

Viscosity, dynamic: 1,61 mPa.s (40°C); 2,07 mPa.s (20°C)

Oxidizing properties: The substance or mixture is not classified as oxidizing.

Surface tension: 40,1 mN/m, 20°C

Metal corrosion rate: Corrosive to metals

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: No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Ingestion

Inhalation

Skin contact

Eye contact

Acute toxicity**Product:**Acute oral toxicity: LD₅₀ (Rat, female): ca. 550 mg/kgAcute inhalation toxicity: LC₅₀ (Rat, male and female): 0,64 mg/l (4 h)Acute dermal toxicity: LD₅₀ (Rat, male and female): > 5.000 mg/kg**Skin corrosion/irritation**

No skin irritation (rabbit)

Serious eye damage/eye irritation

No eye irritation (rabbit)

Respiratory or skin sensitisation**Product:**

Did not cause sensitisation on laboratory animals (Guinea pig)

12. ECOLOGICAL INFORMATION

Ecotoxicity Product:**Toxicity to fish:** LC₅₀ (*Cyprinus carpio* (Carp)): > 100 mg/l (96 h)**Toxicity to Daphnia and other aquatic invertebrates:** EC₅₀ (*Daphnia magna* (Water flea)): 27,9 mg/l (48 h)**Toxicity to algae:** ErC₅₀ (*Pseudokirchneriella subcapitata* (green algae)): 0,153mg/l (72 h)NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0,022mg/l (72 h)ErC₅₀ (*Lemna gibba* G3 (gibbous duckweed)): 0,0152 mg/l (7 d)NOEC (*Lemna gibba* G3 (gibbous duckweed)): 0,00325 mg/l (7 d)**Persistence and degradability**

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods**Waste from residues:** Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer.



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Where possible recycling is preferred to disposal or incineration.

If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: 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

UNRTDG

UN number: UN 1760

Proper shipping name: CORROSIVE LIQUID, N.O.S. (DIQUAT DIBROMIDE)

Class: 8

Packing group: III

Labels: 8

IATA-DGR

UN/ID No.: UN 1760

Proper shipping name: Corrosive liquid, n.o.s. (DIQUAT DIBROMIDE)

Class: 8

Packing group: III

Labels: Corrosive

Packing instruction (cargo aircraft): 856

Packing instruction (passenger aircraft): 852

IMDG-Code

UN number: UN 1760

Proper shipping name: CORROSIVE LIQUID, N.O.S. (DIQUAT DIBROMIDE)

Class: 8

Packing group: III

Labels: 8

EmS Code: F-A, S-B

Marine pollutant: yes

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 Material Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture: None known.

Hazardous components which must be listed on the label: diquat dibromide



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16. OTHER INFORMATION

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.
