



Material Safety Data Sheet

YONGNONG CHEM

DIQUAT 20% SL

1. IDENTIFICATION OF THE SUBSTANCE

Product name: DIQUAT 20% SL

Company Identification:

YONGNONG BIOSCIENCES CO., LTD.

Add: NO.3 WEIQI RD(EAST), HANGZHOU GULF FINE, CHEMICAL ZONE, SHANGYU, CHINA

Tel: 86-577- 88956226, P.C.: 312369

1. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: bipyridylum herbicide

Ingredient Name	CAS Number	Concentration (% w/v)
Diquat	85-00-7	20% Min.
Inert Ingredients		80% Max.

3. HAZARD IDENTIFICATION

Harmful if swallowed.

Irritant (eye, skin, respiratory passages, skin sensitizer).

4. FIRST AID MEASURES

General information

Eyes: Flush with clean running water for 15 minutes and get medical attention even if no irritation arises. Call a physician or contact a Poison Control Centre.

Skin: Wash material off the skin with plenty of soap and water. If redness occurs or material contacts a skin cut or an area of abrasion, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

Ingestion: Induce vomiting. TRANSFER TO HOSPITAL IMMEDIATELY. SPEED IS ESSENTIAL. If delay is unavoidable, administer fluids and induce further vomiting. If bentonite, activated charcoal or Fuller's earth is available, administer it.

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

Advice to doctor:

To be effective, treatment for diquat poisoning must begin immediately. Treatment consists of binding diquat in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination, and removal of diquat from blood by charcoal hemoperfusion.

5. FIRE-FIGHTING MEASURES

Flash Point: not applicable.

Suitable extinguishing media: Water fog, alcohol foam, carbon dioxide, dry chemical, halogenated agents.



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Special equipment for the protection of firefighters: Self-contained breathing apparatus with full-face piece and protective clothing

Unusual fire and explosion hazards: Possible toxic smoke, vapors, fallout and runoff water can result from fires depending on extent of combustion and presence of other combustible materials. Contaminated buildings, areas and equipment must not be used until they are properly decontaminated.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. Wear suitable protective clothing and eye protection to prevent skin and eye contact. In case of insufficient ventilation, wear suitable respiratory equipment.

Land spill or leak: If the container is leaking, secure leak and place the container in heavy plastic bag or drum. Remove as much as possible by absorbing with inert material. Remove any contaminated soil. Place in closed, labeled containers and store in a safe place to await disposal. Generously cover the contaminated areas with common, household detergent. Using a stiff brush and small amounts of water, work the detergent into the remaining spilled material forming a slurry. Brush the slurry into cracks and crevices and allow to stand for 2-3 minutes. Be careful to completely avoid skin or eye contact. Do not splatter on oneself or bystanders. Spread absorbent on the slurry liquid and shovel mixture into the open drum. Rinse with small amount of water and use absorbent to collect the wash solution. Shovel into the open drum. Seal drum and dispose of contaminated material in a facility permitted for hazardous waste. Large spills should be handled according to a spill plan.

7. HANDLING AND STORAGE

Store: Containers should be stored in a cool, dry, well-ventilated area away from flammable materials and sources of heat or flame. Exercise due caution to prevent damage to or leakage from the container. Do not store near feed, food, or within the reach of children.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering controls: Ensure adequate ventilation. Avoid generating and inhaling mists. Keep container closed when not in use

Personal protection: Will irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing the dilute solution, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), rubber boots, elbow-length PVC gloves, apron and face shield. If inhalation risk, wear organic vapor /particulate respirator, When using the prepared solution, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length PVC gloves, face shield or goggles. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing. Avoid contact with vegetation wet with spray. If necessary wear waterproof footwear and water protective clothing and gloves.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark brown liquid.

Odor: odorless

Flash Point: does not flash

Boiling point: approx 100 °C

Melting point: Not available.

Density: 1.17 g/ml at 20 °C

Solubility: soluble in/with water

pH(quant.): 4-8

10. STABILITY AND REACTIVITY

Stability: Stable.

Reactivity: Corrosive to most metals including zinc, aluminium and mild steel.

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapors.

11. TOXICOLOGICAL INFORMATION

Acute studies

Oral LD₅₀ (rat): 1389mg/kg for male.

Dermal LD₅₀ (rat): 1000 mg/kg for male and female.

Skin irritation(rat): Slight irritant to rabbit skin.

Eye irritation(rabbit): Mild irritant to rabbit eyes.

Inhalation: Unlikely to cause harmful effects when handled and used as directed on the label. Nose bleeding and soreness of the throat may result from spray mist or dust trapped on the nasal mucosa. If this occurs review spraying and handling technique.

Sensitization: It is not a skin sensitizer in animal tests.

Long Term Exposure: Ocular effects (cataracts) have been reported following long term oral exposure of laboratory animals (rat and dog). This is not considered to be a risk to man when handled and used as directed on the label.

12. ECOLOGICAL INFORMATION (based on active ingredient)

Acute toxicity

Acute toxicity to birds: Acute oral LD₅₀ for mallard ducks 155, partridges 295 mg/kg.

Acute toxicity to fish: LC₅₀ (96 h) for rainbow trout 39, mirror carp 125 mg/l.

Acute toxicity to daphnia: LC₅₀ (48 h) 2.2g/l.

Acute toxicity to algae: EC₅₀ (96 h) 21g/l.

Acute toxicity to bees: LD₅₀ (oral, 120 h) 22g/bee.



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Acute toxicity to worms: LC₅₀ (14 d) 243mg/kg.

Environmental fate

In animals: In rats, following oral administration of diquat dibromide, the dose is completely eliminated in the urine and faeces within 4 days.

In plants: Metabolic breakdown of diquat dibromide does not occur in plants. On plant surfaces, photochemical degradation occurs.

In soil/environment: Rapidly degraded by soil micro-organisms, DT₅₀ of unadsorbed diquat <1w; strong binding in soil increases persistence. Strongly bound and inactivated by soil and aquatic sediments and does not leach into groundwater; K_d >10 000.

13. DISPOSAL CONSIDERATIONS

Container Disposal: Do not contaminate ponds, waterways or ditches with chemical or used containers. Surplus material must be disposed of as detailed in the 'Guidelines for the avoidance, limitation and disposal of pesticide waste on the farm' GCPF, 1987. Empty containers should be washed and discarded. Empty containers should not be used for other purposes. Disposal should be in accordance with local, state or national legislation.

14. TRANSPORT INFORMATION

Proper shipping name: Diquat, Corrosive Liquid, Toxic.

UN number: 1760

CLASS NO.:8

Packing group: III

15. REGULATORY INFORMATION

Hazard symbols: Xn

Risk Phrases: (R22) Harmful if swallowed.

Safety Phrases: (S2) Keep out of the reach of children.

(S13) Keep away from food, drink and animal feeding stuffs.

(S20/21) When using, do not eat, drink or smoke.

(S36/37) Wear suitable protective clothing and gloves.

(S46) If swallowed, seek medical advice immediately and show this container or label.

Special label: (SO53) Do not re-use container, keep tightly closed in a safe place.

16. OTHER INFORMATION

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instruction.