

Q-CHEM

Q-CHEM nv

Leeuwerweg 138 • B-3803 Sint-Truiden • BELGIUM

Tel. +32 (0)11 78 57 17 • Fax +32 (0)11 68 15 65
Mobile +32 (0)474 95 13 91 • E-mail: q-chem@skynet.be

BTW/VAT: BE 865.950.672 • BIC: KREDBEBB
Bank: KBC 733-0209642-55 • IBAN: BE31 7330 2096 4255

Material Safety Data Sheet Product: QUAD

1. Identification of the substance/preparation and of the company undertaking

Product name QUAD
Supplier Q-CHEM NV
Leeuwerweg 138, 3803 Sint-Truiden (Belgium)
Tel.: +32 (0)11 78 57 17, Fax: +32 (0)11 68 15 65

2. Composition/information on ingredients

Use Herbicide/desiccant

Formulation Soluble liquid

Composition/information on ingredients

N°	Name	CAS N°	Content (%)	Symbol	R Phrases
1	diquat dibromide	85-00-7	37.4	T ⁺ , N	22-26-36/37/38-43-48/25-50/53

3. Hazards identification

Harmful if swallowed.
Toxic by inhalation
Irritation to eyes, respiratory system and skin.
May cause sensitisation by skin contact.
Toxic: danger of serious damage to health by prolonged exposure if swallowed.
Very toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

4. First aid measures

General

Remove the affected person from source of exposure. Remove all contaminated clothing and wash affected area.

Ingestion

SPEED IS ESSENTIAL. Seek medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Skin contact

Take off immediately all contaminated clothing. Wash skin immediately with water, followed by soap and water. Such action is essential to minimise contact with skin. Obtain immediate medical attention. Contaminated clothing should be laundered before.

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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.

Inhalation

Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention.

GUIDE TO PHYSICIAN – general advice

After ingestion, give up to 1 litre of 15% aqueous suspension of Fuller's Earth orally or via gastric tube, together with a suitable purgative (200 ml of a 20% aqueous solution of mannitol). If ingested, wash out the stomach and test urine for the presence of diquat. If there is severe mouth ulceration give nothing by mouth until patient's condition has improved. Give intravenous fluids only.

5. Fire fighting measures

Suitable Extinguishing Media

For small fires, use foam, carbon dioxide or dry powder extinguishant. For large fires, use foam or water-fog; avoid use of water jet. Contain run-off water with, for example, temporary earth barriers

Special Hazards during Fire Fighting

Combustion may generate toxic fumes containing HCl, CO and NO₂. Under certain fire conditions, traces of other toxic gasses cannot be excluded.

Protective Equipment for Fire Fighting

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

Specific methods

Cool containers by spraying with water. Contain fire-fighting water, bunding if necessary with sand, earth or other inert material.

6. Accidental release measures

Personal precautions

For personal protection see Section 8.

Environmental protection measures following accidents

Pay attention to protective clothing and safety measures.

Sweep up carefully and shovel sweeping into marked bags of drums. Dispose of through a reputable local waste disposal contractor.

7. Handling and storage

Handling

Avoid contact with skin and clothing. Avoid contact with skin and eyes and avoid inhalation of fog and vapours. Do not eat, drink or smoke while working.

Storage

Store the product in closed original containers.

Storage requirements

Storage Compatibility with other Products: store separate from food and feed.

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8. Exposure controls/personal protection

Personal protection

Wear suitable protective gloves when handling the concentrate and when handling contaminated surfaces. Wash all protective clothing thoroughly after use, especially the inside of the gloves.

9. Physical and chemical properties

Form:	liquid
Colour:	dark red brown
Odour:	pyridine like
Self ignition point:	> 260 °C
Fire promoting properties:	not explosive
pH value:	4 – 5
density:	1.2 g/ml
Solubility:	soluble in water
Flash point:	does not flash

10. Stability and reactivity

Chemical Stability Assessment

The concentrated material is corrosive to most metals including zinc, aluminium and mild steel.

Hazardous decomposition products

Combustion or thermal decomposition will evolve toxic and irritant vapours.

11. Toxicological information

Acute effects of formulated product

Acute oral LD₅₀ for rats between 200 and 2000 mg/kg

Acute percutaneous LD₅₀ for rats: > 2000 mg/kg

Inhalation LC₅₀ (4h): 0.6 mg/L

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.

Skin Irritation (rabbit) mild irritant

Eye Irritation irritant

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.

Skin sensitisation (guinea pig) diquat may cause an allergic reaction

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12. Ecological information

Values for the active ingredient diquat

Toxicity to fish

EC₅₀ (*Cyprinus carpio*): 21 mg/L

Toxicity to aquatic invertebrates, Daphnia

EC₅₀ (*Daphnia magna*): > 1.2 mg/l (48 h)

Growth Inhibition to Algae

EC₅₀ (*Selenastrum capricornutum* – green algae) > 0.26 mg/l (72 h)

13. Disposal considerations

Product Disposal

Contact local authority or a reputable waste disposal company for collection and disposal of unwanted product or containers.

Container Disposal

Dispose of empty Containers in accordance with local regulations.

14. Transport information

ADR / RID / ADN / ADNR / IMDG / ICAO / IATA / DGR

UN 1760

Corrosive liquid, n.o.s. (diquat mixture)

Class 8

PG: III

15. Regulatory information

Hazard symbol

T Toxic

N Dangerous for the environment.

R(isk) phrase(s)

R 22: Harmful if swallowed.

R 23: Toxic by inhalation

R 36/37/38: Irritating to eyes, respiratory system and skin.

R 43: May cause sensitisation by skin contact.

R 48/25: Toxic: danger of serious damage to health by prolonged exposure if swallowed.

R 50/53: Very toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

S(afety) phrase(s)

S 2: Keep out of reach of children.

S 13: Keep away from food, drink and animal feedstuffs.

S 20/21: When using, do not eat, drink or smoke.

S 25: Avoid contact with eyes.

S 28: After contact with skin, wash immediately with water.

S 35: This material and its container must be disposed of in a safe way.

S 36/37: Wear suitable protective clothing and gloves.

S 45: In case of accident or if you feel unwell seek medical advice immediately (show this label where possible).

S 57: Use appropriate containment to avoid environmental contamination.

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16. Other information

All information and instructions provided in this MSDS are based on the current state of scientific and technical knowledge and are presented in good faith and believed to be correct.

MSDS in accordance with directive 2001/58/EC.

This information applies to the product. In case of formulations of mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product.

Library of risk phrases mentioned in paragraph 2 and not in paragraph 15:
R26: Toxic by inhalation