



SAFETY DATA SHEET
according to regulation (EC) no 1907/2006

Mirquat
Version 4 (UK)

Issue date 10/30/2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : **Mirquat**

Usage : Plant grow Regulator

Company : Nufarm UK Limited
Wyke Lane
Wyke
Bradford
West Yorkshire BD12 9EJ
United Kingdom

Telephone : +44 (0)1274 691234
Telefax : +44 (0)1274 691176
E-mail : infouk@uk.nufarm.com

Emergency telephone : **+44(0)1274 696603**

2. HAZARDS IDENTIFICATION

Harmful if swallowed.
Harmful to aquatic organisms.
May cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Aqueous solution
Contains 730 g/L Chlormequat Chloride

Components	CAS-No.	EINECS-No. ELINCS-No.	Symbol(s)	R-phrases(s)	Concentration (w/w)
chlormequat chloride	999-81-5	213-666-4	Xn	R21/22	65.0 %

4. FIRST AID MEASURES

Eye contact : Rinse immediately with plenty of water for at least 15 minutes.
If eye irritation persists, consult a specialist.

Skin contact : Wash off immediately with soap and plenty of water. If
symptoms persist, call a physician.

Inhalation : Move to fresh air. If symptoms persist, call a physician.

Ingestion : Do NOT induce vomiting. Rinse mouth. Obtain medical
attention.

Notes to physician



Treatment : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

- Specific hazards during fire fighting : In the event of fire (HCl, Cl₂, NO_x, CO) may be formed.
- Special protective equipment for fire-fighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Suitable extinguishing media : Water spray, Dry powder, Alcohol-resistant foam, Carbon dioxide (CO₂)
- Extinguishing media which shall not be used for safety reasons : High volume water jet
- Further information : Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Use personal protective equipment. (see Chapter 8)
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
- Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Sweep up and shovel into suitable containers for disposal.
- Additional advice : Never return spills in original containers for re-use.

7. HANDLING AND STORAGE

Handling

- Safe handling advice : Wear personal protective equipment. Do not breathe vapours or spray mist.

Storage

- Requirements for storage areas and containers : Store in original container. Keep in a cool, well-ventilated place.
- Advice on common storage : Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

- Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
- Hand protection : PVC or nitrile-rubber gloves
- Eye protection : Safety glasses, or, Goggles
- Skin and body protection : Long sleeved clothing
- Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Avoid contact with skin.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Physical state : liquid
- Colour : light yellow
- Odour : amine-like

Other data

- Boiling point/boiling range : ca.100 °C
- Flash point : does not flash
- Vapour pressure : <1E-02 Pa
at 20 °C
(Chlormequat chloride)
- Density : 1.136 g/cm³
at 20 °C
- Water solubility : completely miscible
- pH : 5 - 7
- Partition coefficient: n-
octanol/water : log POW = -1.59



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(pH 7), (Chlormequat chloride)

Viscosity, dynamic : 20 mPa.s
at 20 °C

10. STABILITY AND REACTIVITY

- Thermal decomposition : No decomposition if stored and applied as directed.
- Conditions to avoid : No dangerous reaction known under conditions of normal use.
- Materials to avoid : Aluminium and its alloys

11. TOXICOLOGICAL INFORMATION

- Acute oral toxicity : LD50 rat
Dose: > 550 mg/kg
- Acute dermal toxicity : LD50 rat
Dose: > 2,000 mg/kg
- Acute inhalation toxicity : LC50 rat
Exposure time: 4 h
Dose: > 0.71 mg/l
- Skin irritation : rabbit
Result: No skin irritation
- Eye irritation : rabbit
Result: No eye irritation
- Sensitisation : Guinea-pig
Result: Did not cause sensitization.
- Further information : Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).



12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability : Readily biodegradable, according to appropriate OECD test.

Stability in soil : DT50 : 8 - 10 d

Ecotoxicity effects

Toxicity to bees : Not toxic to bees.

Toxicity to birds : LC50 *Anas platyrhynchos* (Mallard Duck)
Dose: > 5,620 ppm

Toxicity to fish : LC50
Dose: > 430 mg/l
Testing period: 3 d

Toxicity to daphnia : EC50
Dose: > 31.7 mg/l
Testing period: 2 d

Toxicity to algae : EC50
Dose: > 661 mg/l
Exposure time: 72 h

13. DISPOSAL CONSIDERATIONS

Product : Dispose of product and packaging in accordance with The Green Code. (The Code of Practice for the safe use of Pesticides on Farms and Holdings.) A MAFF Publication.

Contaminated packaging : Do not re-use empty containers. Dispose empty and triple rinsed container within a local disposing system

According to European Directive 2000/532/EC as amended :

Waste Key Number : 02 01 08 (agrochemical waste containing dangerous substances)



14. TRANSPORT INFORMATION

UN-Number : **1760**

Description of the goods : UN1760 CORROSIVE LIQUID, N.O.S.(chlormequat)

ADR/RID

Class : 8
Packaging group : III

IMDG

Class : 8
Packaging group : III

IATA-DGR

Class : 8
Packaging group : III

15. REGULATORY INFORMATION

Symbol(s)	: Xn	Harmful
R-phrase(s)	: R22 R52/53	Harmful if swallowed. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	: S 2 S 7 S13 S20/21 S46 S61 S36/39	Keep out of the reach of children. Keep container tightly closed. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. If swallowed, seek medical advice immediately and show this container or label. Avoid release to the environment. Refer to special instructions/ Safety data sheets. Wear suitable protective clothing and eye/face protection.



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Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.

16. OTHER INFORMATION

Print Date : 30/10/2009

(Alterations are indicated in the left hand margin by: ||)

Full text of any R phrases referred to under heading 3:
R21/22 - Harmful in contact with skin and if swallowed.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.