



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

Sigma PCT
Version 5 (UK)

Issue date 10/30/2009

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

Product information

Trade name : **Sigma PCT**

Usage : Plant grow Regulator

Company : Nufarm UK Limited
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Wyke
Bradford
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United Kingdom

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

2. HAZARDS IDENTIFICATION

Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Aqueous solution
Contains 460g/l Chlormequat Chloride

Components	CAS-No.	EINECS-No. ELINCS-No.	Symbol(s)	R-phrased(s)	Concentration (w/w)
chlormequat chloride	999-81-5	213-666-4	Xn	R21/22	42.0 %

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



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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

- Form : liquid
- Colour : light yellow
- Odour : amine-like

Other data

- Boiling point/boiling range : 100 °C
- Flash point : does not flash
- Vapour pressure : 1E-02 Pa
at <20 °C
(Chlormequat chloride)
- Density : 1.1 g/cm³
at 20 °C
- Water solubility : completely miscible
- pH : 2 - 4
- Partition coefficient: n-
octanol/water : log POW = 1.59
(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: 966 mg/kg
Test substance: (Chlormequat chloride)
- Acute dermal toxicity : LD50 rat
Dose: > 4,000 mg/kg
Test substance: (Chlormequat chloride)
- Acute inhalation toxicity : LC50 rat
Exposure time: 4 h
Dose: > 5.2 mg/l
Test substance: (Chlormequat chloride)
- Skin irritation : Classification: No skin irritation
- Eye irritation : Classification: No eye irritation
- Sensitisation : Classification: Not sensitizing to skin.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

- Biodegradability : Readily biodegradable, according to appropriate OECD test.

Ecotoxicity effects

- Toxicity to fish : LC50



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Dose: > 100 mg/l
Testing period: 96 h
Test substance: (Chlormequat chloride)

Toxicity to daphnia : EC50
Dose: > 31.7 mg/l
Testing period: 48 h
Test substance: (Chlormequat chloride)

Toxicity to algae : Dose: > 100 mg/l
Exposure time: 72 h
Test substance: (Chlormequat chloride)

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



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IATA-DGR

Class : 8
Packaging group : III

15. REGULATORY INFORMATION

Labelling according to EC

Directives : EEC/99/45

Symbol(s) : Xn Harmful

R-phrase(s) : R22 Harmful if swallowed.

S-phrase(s) : S 2 Keep out of the reach of children.
S13 Keep away from food, drink and animal feedingstuffs.

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.