

**K-OTHRINE 1% SC10 12X1L BOT GB**Version 4 / GB
1020000024731/8
Revision Date: 31.07.2007
Print Date: 07.08.2007**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name K-OTHRINE 1% SC10 12X1L BOT GB
Product code (UVP) 05937760
Usage Insecticide
Company Bayer Environmental Science
230 Cambridge Science Park
Milton Road
Cambridge
Cambridgeshire CB4 0WB
Great Britain

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Responsible Department Email: BES.MSDS@bayercropscience.com

Emergency telephone number 0800-220876 (UK 24 hr)
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2. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

|| Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Suspension concentrate (=flowable concentrate)(SC)
Deltamethrin 10 g/l

Hazardous components

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
Deltamethrin	52918-63-5 258-256-6	T, N	R23/25, R50/53	0.99
Formaldehyde	50-00-0 200-001-8	T	R23/24/25, R34, R40, R43	> 0.10 - < 3.00
1,2-Propanediol	57-55-6 200-338-0			> 1.00

For the full text of the R phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES**Inhalation**

Move to fresh air. Keep patient warm and at rest. If symptoms persist, call a physician.



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Skin contact

Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. After skin contact: Apply Vitamin E cream or a simple body milk. If symptoms persist, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

Ingestion

Obtain medical attention. Do NOT induce vomiting. Rinse mouth. Keep at rest.

Notes to Physician

Symptoms

Local: skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours., eye and mucous membrane irritation, cough

Symptoms

Systemic: discomfort in the chest, bronchial hypersecretion, pulmonary oedema, tachycardia, low blood pressure, Palpitation, Vomiting, Diarrhoea, Abdominal pain, Nausea, Salivation, dizziness, blurred vision, headache, apathy, anorexia, somnolence, Coma, spasm, Convulsions, Tremors, ataxia, muscular fasciculation

Risks

This product contains a pyrethroid.
Must NOT be confused with organophosphorus compounds!

Treatment

Local treatment:
After eye contact: Instillation of local anaesthetic drops e.g. 1% Amethocaine Hydrochloride eye drops. Give Analgesics as necessary.

Treatment

Systemic treatment:
Endotracheal intubation and gastric lavage, followed by administration of charcoal and sodium sulphate.
Monitoring of respiratory and cardiac functions.
Anti-convulsive therapy: Diazepam i.v. is the remedy of choice; barbiturates, e.g. phenobarbital and calcium gluconate, may also be used.
There is no specific antidote.
Contraindication: derivatives of adrenaline.
Contraindication: atropine.
Spontaneous recovery.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which should not be used for safety reasons

High volume water jet

Specific hazards during fire fighting

Dangerous gases are evolved in the event of a fire.

Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.
In the event of fire, wear self-contained breathing apparatus.



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Further information

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.
Whenever possible, contain fire-fighting water by diking area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Keep people away from and upwind of spill/leak.
Avoid contact with spilled product or contaminated surfaces.
When dealing with a spillage do not eat, drink or smoke.

Environmental Precautions

Do not allow to get into surface water, drains and ground water.
If spillage enters drains leading to sewage works inform local water company immediately.
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

Methods for Cleaning Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Keep in suitable, closed containers for disposal.
Clean floors and contaminated objects with plenty of water.

Additional Advice

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.
Check also for any local site procedures.

7. HANDLING AND STORAGE

Handling

Advice on safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice.
Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

No special precautions required.

Storage

Requirements for storage areas and containers

Store in a place accessible by authorized persons only.
Keep away from direct sunlight.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Protect from freezing.

Storage stability

Other data

Storage temperature should ideally lie between 0 and 30 °C, however, storage for two weeks at 54 °C has shown no adverse effects regarding product safety or stability.

Suitable materials

HDPE (high density polyethylene)

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Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Formaldehyde	50-00-0	2.5 mg/m ³ / 2 ppm (TWA)	2005	EH40 WEL
Formaldehyde	50-00-0	2.5 mg/m ³ / 2 ppm (STEL)	2005	EH40 WEL
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m ³ (TWA)	2005	EH40 WEL
1,2-Propanediol (Vapor and particulates.)	57-55-6	474 mg/m ³ / 150 ppm (TWA)	2005	EH40 WEL

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory Protection	No personal respiratory protective equipment normally required. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
Hand Protection	Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.
Eye protection	Wear goggles conforming to EN166 (Field of Use 5 or equivalent).
Skin and body protection	Wear standard coverall and type 6 suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
Hygiene measures	When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Wash hands immediately after work, if necessary take a shower.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	suspension
Colour	colourless to white

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Odour	weak, characteristic
Safety data	
pH	2 - 6 at 100 % (20 °C) Determined in the undiluted form.
Density	approx. 1.01 g/cm ³ at 20 °C
Water solubility	miscible

10. STABILITY AND REACTIVITY

Conditions to Avoid	Extremes of temperature and direct sunlight.
Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) > 10,000 mg/kg
Acute Inhalation Toxicity	LC50 (rat) > 20.0 mg/l Exposure time: 4 h The information is derived from the properties of the individual components.
Acute Dermal Toxicity	LD50 (rat) > 10,000 mg/kg
Skin Irritation	No skin irritation. (rabbit)
Eye Irritation	Slight irritant effect - does not require labelling. (rabbit)
Sensitization	Non-sensitizing. (guinea pig) The information is derived from the properties of the individual components.

Further information

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae.
However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

Bioaccumulation	Bluegill sunfish Bioconcentration factor (BCF): 1,400
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Ecotoxicity effects

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Toxicity to Fish	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 0.00091 mg/l Exposure time: 96 h
Toxicity to daphnia	EC50 (Water flea (<i>Daphnia magna</i>)) 0.00056 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (Algae) > 9.1 mg/l Exposure time: 96 h

Further information on ecology

Additional ecological information

The ecological data given are those of the active ingredient deltamethrin.

13. DISPOSAL CONSIDERATIONS**Product**

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging

Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.

Add washings to sprayer at time of filling.

Dispose of empty and cleaned packaging safely.

Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.

Return large containers to supplier.

Follow advice on product label and/or leaflet.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION**ADR/RID/ADNR**

UN-Number	3082
Labels	9
Packaging group	III
Hazard no.	90
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

IMDG

UN-Number	3082
Labels	9
Packaging group	III
EmS	F-A , S-F
Marine pollutant	Marine pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

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		(DELTAMETHRIN SOLUTION)
IATA		
	UN-Number	3082
	Labels	9
	Packaging group	III
	Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)
UK 'Carriage' Regulations		
	UN-Number	3082
	Labels	9
	Packaging group	III
	Hazard no.	90
	Emergency action code	3Z
	Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

15. REGULATORY INFORMATION

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3 and any subsequent amendments.

Classification:

|| Hazard warning labelling compulsory

Hazardous components which must be listed on the label:

- Deltamethrin

Symbol(s)

|||N Dangerous for the environment

R-phrases)

|||R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases)

|||S35 This material and its container must be disposed of in a safe way.
|||S57 Use appropriate container to avoid environmental contamination.

|| CLASSIFICATION ACCORDING TO SPECIFIC UK REGULATIONS:

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3 and any subsequent amendments.

R-phrases)

|||R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Exceptional labelling

To avoid risks to man and the environment, comply with the instructions for use.
Contains formaldehyde. May produce an allergic reaction.

Further information

WHO-classification: III (Slightly hazardous)



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16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 3:

R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R23/25	Toxic by inhalation and if swallowed.
R34	Causes burns.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.