

**K-OBIOL UL66 1X20L DRM GB**Version 2 / GB
1020000026181/8
Revision Date: 08.07.2005
Print Date: 03.07.2007**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name	K-OBIOL UL66 1X20L DRM GB
Product code (UVP)	05939666
Product code	AE F032640 14 UL07 A1
Specification	21467
Usage	insecticide
Company	Bayer Environmental Science 230 Cambridge Science Park Milton Road Cambridge Cambridgeshire CB4 0WB Great Britain
Telephone	+44(0)1223 226500
Telefax	+44(0)1223 426240
Emergency telephone number	0800-220876 (UK 24 hr) +44(0)1603-242424 (Overseas 24 hr)

2. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**Ultra-low volume (ULV) liquid (UL)
Deltamethrin/Piperonyl Butoxide 6/60 g/l**Hazardous components**

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrases(s)	Concentration [%]
Deltamethrin	52918-63-5 258-256-6	T, N	R23/25, R50/53	0.67
Piperonyl butoxide	51-03-6 200-076-7	N	R50/53	6.10

3. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

Harmful by inhalation.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES**General advice**

Remove contaminated, soaked clothing immediately and dispose of safely.

Inhalation

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

Skin contact

Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of



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water. After skin contact: Apply Vitamin E cream or simple toilet milks. When symptoms persist or in all cases of doubt seek medical advice.

Eye contact

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion

Do not induce vomiting. Wash out mouth with water. Keep at rest. Obtain medical attention.

Notes to Physician

Symptoms

Local: After skin contact: paresthesia (local)., May cause skin and eye irritation., Inhalation may provoke the following symptoms: irritation, cough

Symptoms

Systemic: excitement, gastrointestinal discomfort, tremors, Dizziness, headache, listlessness, nausea and vomiting, epigastric pain, muscular fasciculation of limbs, unconsciousness, convulsions and coma (very high doses).

Risks

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

Treatment

Local treatment:
Initial treatment should be symptomatic and supportive.
After eye contact: Instillation of local anaesthetic drops e.g. 1% Amethocaine Hydrochloride eye drops. Give Analgesics as necessary.

Treatment

Systemic treatment:
Endotracheal intubation should be done and gastric lavage performed, followed by administration of charcoal.
Monitoring of respiratory and cardiac functions.
ECG - monitoring (Electrocardiogram).
Check for pulmonary oedema in event of inhalation.
Keep airway clear, administer artificial respiration if necessary.
Against convulsions: Give diazepam: for adults 5-10 mg intravenously as necessary until fully sedated; for children 2.5 mg i.v.
There is no specific antidote.
Contraindication: atropine.
Contraindication: derivatives of adrenaline.
Recovery: Spontaneous.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Extinguishing media which must not be used for safety reasons

high volume water jet

Specific hazards during fire fighting

In case of fire the evolution of dangerous gases is possible.

Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.
Wear self contained breathing apparatus for fire fighting if necessary.



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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 discharge into the drains/surface water/groundwater.
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

Take up with absorbent material (e.g. sand, earth or a proprietary absorbent material).
Transfer collected material to heavy duty plastic drums and keep safe for disposal.
Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

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

Storage stability
Storage temperature 0 - 30 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment))

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Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Personal protective equipment

Respiratory Protection	Wear respirator conforming to EN140 Type A filter.
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	Chemical resistant goggles must be worn.
Skin and body protection	Light protective clothing, PVC PVC boots
Hygiene measures	When using, do not eat, drink or smoke. Remove soaked clothing immediately. Remove soiled clothing immediately. Clean hands and face at work intervals and after work. Work in an adequately ventilated room.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	liquid, clear
Colour	yellow

Safety data

Flash Point	137 °C
Density	ca. 0.89 g/cm ³ at 20 °C
Water Solubility	immiscible
Surface tension	29.5 mN/m at 20 °C
Other Information	Combustible liquid

10. STABILITY AND REACTIVITY

Conditions to Avoid	Extremes of temperature and direct sunlight.
Materials to avoid	None.
Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions.

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Acute Oral Toxicity	LD50 (rat) > 2,000 mg/kg
Acute Inhalation Toxicity	LC50 (rat) 2.69 mg/l Exposure time: 4 h Test conducted with a similar formulation.
Acute Dermal Toxicity	LD50 (rabbit) > 4,000 mg/kg
Skin Irritation	slight irritant effect - does not require labelling (rabbit)
Eye Irritation	No eye irritation (rabbit)
Sensitization	Non-sensitizing (guinea pig) OECD Test Guideline 406, Magnusson & Kligman test Test conducted with a similar formulation.

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
The value mentioned relates to the active ingredient deltamethrin.

Ecotoxicity effects

Toxicity to Fish LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 0.00091 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient deltamethrin.

Toxicity to Fish LC50 (*Cyprinodon variegatus* (sheepshead minnow)) 3.94 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient piperonyl butoxide.

Toxicity to daphnia EC50 (Water flea (*Daphnia magna*)) 0.00056 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient deltamethrin.

Toxicity to daphnia EC50 (Water flea (*Daphnia magna*)) 0.51 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient piperonyl butoxide.

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Toxicity to algae EC50 (Algae) > 9.1 mg/l
 Exposure time: 72 h
 The value mentioned relates to the active ingredient deltamethrin.

13. DISPOSAL CONSIDERATIONS**Product**

In accordance with local authority regulations, take to hazardous waste disposal site or hazardous waste incineration plant.
 Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging

Empty residue into application equipment.
 Dispose of empty and cleaned packaging safely.
 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-No	3082
Labels	9
Packaging group	III
Hazard no.	90
Description of the goods	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

IMDG

UN-No	3082
Class	9
Packaging group	III
EmS	F-A , S-F
Marine pollutant	Marine pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

IATA

UN-No	3082
Class	9
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

UK 'Carriage' Regulations

UN-No	3082
Labels	9
Packaging group	III
Hazard no.	90

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Emergency action code	3Z
Description of the goods	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

Classification according to 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004' and any subsequent amendments.

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:

|| Labelling according to EEC Directive

Hazardous components which must be listed on the label:

- Deltamethrin
- Piperonyl butoxide

Symbol(s)

 Xn	Harmful
 N	Dangerous for the environment

R-phrases(s)

 R20	Harmful by inhalation.
 R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

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

Exceptional labelling

To avoid risks to man and the environment, comply with the instructions for use.

Further information

WHO-classification: III (Slightly hazardous)

16. OTHER INFORMATION**Further information**

Text of R phrases mentioned in Section 2:

R23/25	Toxic by inhalation and if swallowed.
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



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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.