



K-OBIOL EC275 12X1L BOT GB

Version 2 / F
102000002608

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Revision Date: 27.03.2006
Print Date: 03.07.2007

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

Product information

Trade name K-OBIOL EC275 12X1L BOT GB
Product code (UVP) 05939488
Usage insecticide
Company Bayer Environmental Science
16, rue Jean-Marie Leclair
69009 Lyon
France

Emergency telephone number +33(0)4.72.85.25.25
Telefax +33(0)4.72.85.27.99
Numéro INRS +33(0)1.45.42.59.59

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Emulsifiable concentrate (EC)
Deltamethrin/Piperonyl butoxide 25:250 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	2,70
Piperonyl butoxide	51-03-6 200-076-7	N	R50/53	23,90
Tetrapropylene benzene sulfonate, calcium salt	11117-11-6 234-360-7	C	R21, R34, R52/53	> 1,00 - < 5,00
2-Methylpropan-1-ol	78-83-1 201-148-0	Xi	R10, R37/38, R41, R67	> 1,00 - < 5,00
Solvent Naphtha (petroleum), light aromatic	64742-95-6	Xn, N	R10, R37, R51/53, R65, R66, R67	> 50,00

3. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Flammable.
Harmful by inhalation and if swallowed.
Irritating to respiratory system.
Risk of serious damage to eyes.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Harmful: may cause lung damage if swallowed.
Repeated exposure may cause skin dryness or cracking.

4. FIRST AID MEASURES



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General advice

Remove contaminated clothing immediately and dispose of safely.

Inhalation

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

Skin contact

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

Eye contact

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

Ingestion

Obtain medical attention. Do not induce vomiting. Rinse mouth. Risk of product entering the lungs on vomiting after ingestion. Keep at rest.

Notes to Physician

Symptoms

Local:., After skin contact: paresthesia (local)., May cause irritation to skin and mucous membranes., 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 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



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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.

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.

Methods for Cleaning Up

Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material).

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

The product is flammable.

Keep away from sources of ignition - No smoking.

Vapours may form explosive mixture with air.

Storage

Requirements for storage areas and containers

Keep containers tightly closed in a cool, well-ventilated place.



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Store in a place accessible by authorized persons only.
Keep away from direct sunlight.
Protect against frost.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.

Storage stability
Storage temperature 0 - 30 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
2-Methylpropan-1-ol	78-83-1	150 mg/m ³ / 50 ppm (VME)	2003	INRS (FR)

Personal protective equipment

- Respiratory Protection** Wear respirator conforming to EN140 type A filter.
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.
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.
- Hygiene measures**
When using, do not eat, drink or smoke.
Remove soiled clothing immediately.
Remove soaked protective clothing immediately.
Clean hands and face at work intervals and after work.
Work in an adequately ventilated room.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Colour yellow

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Flash Point	42 °C
Ignition temperature	> 450 °C The data refers to solvent naphtha petroleum.
Upper explosion limit	7,00 %(V) The data refers to solvent naphtha petroleum.
Lower explosion limit	0,8 %(V) The data refers to solvent naphtha petroleum.
Relative vapour density	1,00 The data refers to solvent naphtha petroleum.
Density	ca. 0,94 g/cm ³ at 20 °C
Water Solubility	emulsifiable
Other Information	The product is flammable.

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.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) 710 mg/kg
Acute Inhalation Toxicity	LC50 (rat) 2,69 mg/l Exposure time: 4 h Irritating to respiratory system. Test conducted with a similar formulation.
Acute Dermal Toxicity	LD50 (rat) > 2.000 mg/kg
Skin Irritation	No skin irritation. (rabbit)
Eye Irritation	Risk of serious damage to eyes. (rabbit)

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).

|| When inhaled in high concentration, the solvent vapours cause a narcotic effect.

**K-OBIOL EC275 12X1L BOT GB**Version 2 / F
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Bioaccumulation Bluegill sunfish
Bioconcentration factor (BCF): 1.400
The value mentioned relates to the active ingredient deltamethrin.

Bioaccumulation Bluegill sunfish
Bioconcentration factor (BCF): 260
The value mentioned relates to the active ingredient piperonyl butoxide.

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 (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.

Toxicity to algae EC50 (Algae) > 9,1 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient deltamethrin.

13. DISPOSAL CONSIDERATIONS**Product**

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

Contaminated packaging

Rince empty containers and dispose of them through the ADIVALOR collection organization or another specific collection system. Smaller packagings (consumer products) can also be disposed of through the cost-free Dual Collection System (Green Dot).

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

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

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UN-No	1993
Labels	3
Packaging group	III
Hazard no.	30
Description of the goods	UN 1993 FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
Special Provision	640E

IMDG

UN-No	1993
Class	3
Packaging group	III
EmS	F-E , S-E
Marine pollutant	Marine pollutant
Description of the goods	FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)

IATA

UN-No	1993
Class	3
Packaging group	III
Description of the goods	FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)

15. REGULATORY INFORMATION

Classification and labelling in accordance with the EC Directive on dangerous preparations 1999/45/EC as amended.

Classification:

Labelling according to EEC Directive

Hazardous components which must be listed on the label:

- Deltamethrin
- Piperonyl butoxide
- Solvent Naphtha (petroleum), light aromatic

Symbol(s)

Xn	Harmful
N	Dangerous for the environment

R-phrases(s)

R10	Flammable.
R20/22	Harmful by inhalation and if swallowed.
R37	Irritating to respiratory system.
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.



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S-phrase(s)	
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S35	This material and its container must be disposed of in a safe way.
S39	Wear eye/face protection.
S57	Use appropriate container to avoid environmental contamination.
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Classement France (décision d'autorisation de mise sur le marché)

Symbol(s)
Xn Harmful

R-phrase(s)
R10 Flammable.
R22 Harmful if swallowed.
R41 Risk of serious damage to eyes.

S-phrase(s)
S 2 Keep out of the reach of children.
S13 Keep away from food, drink and animal feedingstuffs.
S20/21 When using do not eat, drink or smoke.

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

Further information
WHO-classification: II (Moderately hazardous)

Législation des Installations Classées pour la Protection de l'Environnement (Loi du 19/07/76 modifiée et Décret du 10/08/05)
Rubrique n° 1172 : Stockage et emploi de substances dangereuses pour l'environnement (très toxiques pour les organismes aquatiques)

Occupational diseases
Table number(s) :
84 Health effects caused by organic solvents in occupational applications.

16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 2:

R10	Flammable.
R21	Harmful in contact with skin.
R23/25	Toxic by inhalation and if swallowed.
R34	Causes burns.
R37	Irritating to respiratory system.
R37/38	Irritating to respiratory system and skin.
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.



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R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

The information provided in this safety data sheet has been provided according the requirements from the French modified decree "arrêté du 5 janvier 1993". This sheet complements the technical sheet but does not replace it. The information contained in this sheet is based on knowledge of the product at the date of publication and is given in good faith. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The user is fully responsible for taking all the necessary precautions whilst using the product. The aim of the statutory regulations indicated is to help the user to fulfil his obligations regarding the use of hazardous products. This list should not be considered as exhaustive. It does not exonerate the user from fulfilling other existing legal obligations in addition to those mentioned, relating to the use and storage of the product. This remains solely the responsibility of the user.

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