

**PYBUTHRIN UL33 4X5L BOT GB**Version 1 / GB
1020000013901/9
Revision Date: 05.04.2006
Print Date: 06.07.2007**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name PYBUTHRIN UL33 4X5L BOT GB
Product code (UVP) 05937876
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)
Pyrethrins/Piperonyl Butoxide 3:30 g/l

Hazardous components

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrases(s)	Concentration [%]
Pyrethrins including cinerins	8003-34-7 232-319-8	Xn, N	R20/21/22, R50/53	0.38
Piperonyl butoxide	51-03-6 200-076-7	N	R50/53	3.40
Odourless kerosine	64742-47-8 265-149-8	Xn	R65, R66	> 50.00

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

Irritating to skin.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Harmful: may cause lung damage if swallowed.

4. FIRST AID MEASURES**General advice**

Remove contaminated clothing immediately and dispose of safely.

Inhalation

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



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Skin contact

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

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

Ingestion

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

Notes to Physician

Symptoms

Local: After skin contact: paresthesia (local).

Symptoms

Systemic: dizziness, headache, anorexia, apathy, nausea, muscular fasciculation

Risks

This product contains a pyrethrin.
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:
In the event of a mouthful or more being ingested, the following measures should be considered:
Endotracheal intubation should be done and gastric lavage performed, followed by administration of charcoal.
Monitoring of respiratory and cardiac functions.
Check for pulmonary oedema in event of inhalation.
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, 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 combustible.
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.
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

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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.

Additional Advice

Observe: Exposure Limits In Air, Gp1: 1000mg/m³ / 200 ppm (aromatic-free or de-aromatised hydrocarbon mixes with < 1% aromatics < 5% n-hexane, < 25% cyclo/Isohexane TRGS 901 No. 72)

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.
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 light yellow

Safety data

Flash Point ca. 65 °C

Ignition temperature 230 °C
The data relate to the solvent.

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Upper explosion limit	13.00 %(V) The data relate to the solvent.
Lower explosion limit	0.60 %(V) The data relate to the solvent.
Relative vapour density	4.5 The data relate to the solvent.
Density	ca. 0.80 g/cm ³ at 20 °C
Water Solubility	insoluble
Viscosity, kinematic	1.77 mm ² /s at 40 °C
Surface tension	24.9 mN/m at 40 °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.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) > 5,000 mg/kg Test conducted with a similar formulation.
Acute Inhalation Toxicity	LC50 (rat) > 5.10 mg/l Exposure time: 4 h Test conducted with a similar formulation.
Acute Dermal Toxicity	LD50 (rat) > 4,000 mg/kg Test conducted with a similar formulation.
Skin Irritation	Irritating to skin. (rabbit)
Eye Irritation	Slight irritant effect - does not require labelling. (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.

12. ECOLOGICAL INFORMATION

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Bioaccumulation Bluegill sunfish
Bioconcentration factor (BCF): 471
The value mentioned relates to the active ingredient pyrethrin.

Bioaccumulation Lepomis macrochirus (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*)) 0.0052 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient pyrethrin.

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 (*Daphnia*) 0.012 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient pyrethrin.

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

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

Contaminated packaging

Empty remaining contents.
Do not use containers for other products.
Clean container with water.
Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations.
Packaging that cannot be cleaned should be disposed of as product waste.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATIONADR/RID/ADNR
UN-No**3082**

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

IATA

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

UK 'Carriage' Regulations

UN-No	3082
Labels	9
Packaging group	III
Hazard no.	90
Emergency action code	3Z
Description of the goods	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PYRETHRINS 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:

Labelling according to EEC Directive

Hazardous components which must be listed on the label:

- Pyrethrins including cinerins
- Piperonyl butoxide
- Odourless kerosine

Symbol(s)

Xn	Harmful
N	Dangerous for the environment

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R-phrases(s)	
R38	Irritating to skin.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
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.
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

CLASSIFICATION ACCORDING TO SPECIFIC UK REGULATIONS:

The labelling information below is that which has been approved under 'The Control of Pesticides Regulations 1986' and/or 'Part III of the Food and Environment Protection Act 1985' and/or 'Plant Protection Product Regulations 1999' and any subsequent amendments and may differ from that indicated by any toxicological and/or other testing otherwise indicated in this 'Safety Data Sheet'.

Symbol(s)	
Xn	Harmful
N	Dangerous for the environment

R-phrases(s)	
R36/38	Irritating to eyes and skin.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

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:

R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
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.

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



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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.