

**SOLFAC EC50 20X500ML BOT ID**Version 2 / D  
1020000060761/8  
Revision Date: 30.08.2005  
Print Date: 27.07.2007**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name SOLFAC EC50 20X500ML BOT ID  
Product code (UVP) 00298468  
Usage insecticide  
Company Bayer CropScience AG  
Alfred-Nobel-Straße 50  
40789 Monheim  
Germany

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Responsible Department Material and Transport Safety Management  
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Emergency telephone number +49(0)2133-51-4233 (Sicherheitszentrale Dormagen, Bayer AG)

**2. COMPOSITION/INFORMATION ON INGREDIENTS****Chemical nature**Emulsifiable concentrate (EC)  
Cyfluthrin 50 g/l**Hazardous components**

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
Cyfluthrin	68359-37-5 269-855-7	T+, N	R23, R28, R50/53	5,70
Xylene	1330-20-7 215-535-7	Xn	R10, R20/21, R38	84,00
Alkyloxyated alkyl phenol	37205-87-1	Xn	R22, R36	5,00
Butan-1-ol	71-36-3 200-751-6	Xn	R10, R22, R37/38, R41, R67	1,00
Dodecyl benzene sulphonate, calcium salt	26264-06-2 247-557-8	Xi	R38, R41	4,00

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

Flammable.  
Harmful by inhalation and if swallowed.  
Risk of serious damage to eyes.  
Irritating to skin.  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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### 4. FIRST AID MEASURES

#### General advice

Move out of dangerous area. If the patient is likely to become unconscious, place and transport in stable sideways position. Remove soiled or soaked clothing immediately. Also heed the risks to your own person.

#### Inhalation

Remove to fresh air. Keep patient warm and at rest. Call a physician immediately.

#### Skin contact

Wash off immediately with soap and plenty of water. After skin contact: Apply Vitamin E cream or simple toilet milks. Take medical treatment.

#### Eye contact

In case of contact with eyes rinse thoroughly with water. Call a physician immediately.

#### Ingestion

Do not induce vomiting. Wash out mouth with water. Call a physician immediately.

#### Notes to Physician

#### Symptoms

Dizziness, headache, listlessness, nausea and vomiting, epigastric pain, muscular fasciculation of limbs, unconsciousness, convulsions and coma (very high doses)., tremors, gastrointestinal discomfort, excitement, Systemic:., Usually transient with resolution within 24 hours., After skin contact: paresthesia (local).

#### Risks

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

#### Treatment

Systemic treatment:  
Endotracheal intubation should be done and gastric lavage performed, followed by administration of charcoal.  
Monitoring of respiratory, cardiac and central nervous system.  
ECG - monitoring (Electrocardiogram).  
Early dialysis (h(a)emoperfusion)  
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.

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### 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

water spray  
carbon dioxide (CO<sub>2</sub>)  
foam  
sand

#### Specific hazards during fire fighting

In the event of fire the following can be released:  
hydrogen chloride (HCl)  
hydrogen cyanide (hydrocyanic acid)  
hydrogen fluoride



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carbon monoxide (CO)

nitrogen oxides (NOx)

### Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.

Use breathing apparatus.

### Further information

Contain the spread of the fire-fighting media.

Do not allow run-off from fire fighting to enter drains or water courses.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions

Avoid contact with spilled product or contaminated surfaces.

Wear personal protective equipment. Unprotected persons must be kept away.

Keep away sources of ignition.

### Environmental Precautions

Do not discharge into the drains/surface water/groundwater.

### Environmental Precautions

Do not allow spilt product to enter soil or waterways

If the product contaminates rivers and lakes or drains inform respective authorities.

Local authorities should be advised if significant spillages cannot be contained.

### Methods for Cleaning Up

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

Clean contaminated floors and objects thoroughly, observing environmental regulations.

Pack spilled material in suitable containers for recovery or disposal.

### Additional Advice

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

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## 7. HANDLING AND STORAGE

### Handling

Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.

Take measures to prevent the build up of electrostatic charge.

### Storage

Requirements for storage areas and containers

Store in original container.

Store in a place accessible by authorized persons only.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

German storage class

3A Flammable Liquids

Storage stability

Other data

The storage temperature should lie between 0 °C and 30 °C,

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maximum up to 50 °C.

Suitable materials

Only use containers that are approved specifically for the substance/product.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Xylene	1330-20-7	440 mg/m <sup>3</sup> / 100 ppm (MAK)	08 2004	TRGS 900
Xylene	1330-20-7	221 mg/m <sup>3</sup> / 50 ppm (TWA)	05 2003	EU ELV
Xylene	1330-20-7	442 mg/m <sup>3</sup> / 100 ppm (STEL)	05 2003	EU ELV
Butan-1-ol	71-36-3	310 mg/m <sup>3</sup> / 100 ppm (MAK)	08 2004	TRGS 900

**Personal protective equipment**

Respiratory Protection      If product is handled while not enclosed, and if skin contact may occur:  
Full mask  
Multi-range filter ABEK/P2

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.

**Hygiene measures**

Avoid contact with skin, eyes and clothing.  
Keep working clothes separately.  
Wash hands immediately after work, if necessary take a shower.  
Remove soiled or soaked clothing immediately and clean thoroughly before using again.  
Garments that cannot be cleaned must be destroyed (burnt).

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form                              liquid, clear  
Colour                            yellow to brown  
Odour                             aromatic

**Safety data**

Flash Point                      24 °C  
DIN 51755

Ignition temperature         > 500 °C

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Vapour pressure	15 hPa at 20 °C
Vapour pressure	69 hPa at 50 °C
Vapour pressure	87 hPa at 55 °C
Density	ca. 0,9 g/cm <sup>3</sup> at 20 °C
Water Solubility	emulsifiable
Viscosity, kinematic	ca. 1,3 mm <sup>2</sup> /s at 20 °C
Impact Sensitivity	not impact-sensitive

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**10. STABILITY AND REACTIVITY**

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Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions.
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**11. TOXICOLOGICAL INFORMATION**

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Acute Oral Toxicity	LD50 (rat) 1.213 mg/kg
Acute Inhalation Toxicity	LC50 (rat) > 0,702 mg/l Exposure time: 4 h (as aerosol) Highest attainable concentration.
Acute Dermal Toxicity	LD50 (rat) > 5.000 mg/kg
Skin Irritation	irritating (rabbit)
Eye Irritation	Risk of serious damage to eyes. (rabbit)

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**12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

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Toxicity to Fish	LC50 (Rainbow trout ( <i>Oncorhynchus mykiss</i> )) 0,47 ug/l Exposure time: 96 h The value mentioned relates to the active ingredient cyfluthrin.
Toxicity to daphnia	EC50 (Water flea ( <i>Daphnia magna</i> )) 0,16 ug/l Exposure time: 48 h The value mentioned relates to the active ingredient cyfluthrin.
Toxicity to algae	IC50 ( <i>Desmodesmus subspicatus</i> ) > 10 mg/l Growth rate Exposure time: 72 h The value mentioned relates to the active ingredient cyfluthrin.

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Dispose of by incineration in an authorised hazardous waste incineration plant. Comply with local legislation.

For larger quantities contact manufacturer.

**Waste key for the unused product**

020108 agrochemical waste containing dangerous substances

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

UN-No	<b>1993</b>
Labels	3
Packaging group	III
Hazard no.	30
Description of the goods	UN 1993 FLAMMABLE LIQUID, N.O.S. (XYLENE, CYFLUTHRIN SOLUTION)
Special Provision	640E

**IMDG**

UN-No	<b>1993</b>
Class	3
Packaging group	III
EmS	F-E , S-E
Marine pollutant	Marine pollutant
Description of the goods	FLAMMABLE LIQUID, N.O.S. (XYLENE, CYFLUTHRIN SOLUTION )

**IATA**

UN-No	<b>1993</b>
Class	3
Packaging group	III
Description of the goods	FLAMMABLE LIQUID, N.O.S. (XYLENE, CYFLUTHRIN 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:

- Cyfluthrin
- Xylene

Symbol(s)

Xn	Harmful
N	Dangerous for the environment

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R-phrase(s)	
R10	Flammable.
R20/22	Harmful by inhalation and if swallowed.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

## Exceptional labelling

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

## Further information

WHO-classification: II (Moderately hazardous)

**National legislation**

Risk classification according to BetrSichV (Germany)	Not subject to the regulations on combustible liquids.
Water contamination class (Germany)	WGK 2 water endangering
Major Accident Hazard Legislation	Subjected to the "Disasters and Major Accidents Act " Annex I, list of dangerous substances, No. 6

## Other regulations

BG Leaflet M004 "Irritant substances / Corrosive substances"  
BG Leaflet M050 "Handling of Hazardous Substances"  
BG Leaflet M053 "General Protective Measures for the handling of hazardous substances"

**16. OTHER INFORMATION****Further information**

Text of R phrases mentioned in Section 2:

R10	Flammable.
R20/21	Harmful by inhalation and in contact with skin.
R22	Harmful if swallowed.
R23	Toxic by inhalation.
R28	Very toxic if swallowed.
R36	Irritating to eyes.
R37/38	Irritating to respiratory system and skin.
R38	Irritating to 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.
R67	Vapours may cause drowsiness and dizziness.

For further information on active ingredients see also: Wirkstoffe in Pflanzenschutz- und Schädlingsbekämpfungsmitteln: physikalisch-chemische und toxikologische Daten IVA, Industrieverb. Agrar e.V. - 3., Neubearb. Aufl. - München; Wien; Zürich; BLV Verl.-Ges.mBH, 2000



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The advice on classification in section 15 of this Safety Data Sheet is based on European Directive on Preparations (1999/45/EC and its subsequent adaptations). The legislation on pesticide preparations should be applied by EU Member States not later than 30 July 2004.

The information given in this Data Sheet has been included in accordance with the guidelines established by EC Directive 1991/155/EC as amended. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

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