



SOLFAC EW50 10X1L BOT IN

Version 1 / IND
1020000286571/10
Revision Date: 12.06.2014
Print Date: 12.06.2014

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name SOLFAC EW50 10X1L BOT IN
Product code (UVP) 81701148

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use Insecticide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer CropScience Limited
Bayer House, Central Avenue,
Hiranandani Estate
400607 Thane (W)
Maharashtra
India

Telephone +91-22-25311030 / 25311234
Telefax +91-22-25455116

1.4 Emergency telephone no.

Indian Emergency Number 022-25311885 (24 hours/day)
Global Incident Response Hotline +1 (760) 476-3964 (Company 3E for Bayer CropScience)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Skin sensitisation: Category 1
H317 May cause an allergic skin reaction.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

R43
N Dangerous for the environment, R50/53

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Cyfluthrin

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H317 May cause an allergic skin reaction.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

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).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Chemical nature**

Emulsion, oil in water (EW)
 Cyfluthrin 50 g/l

Hazardous components

R-phrase(s) according to EC directive 67/548/EEC
 Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS-No. / EC-No.	Classification		Conc. [%]
		EC Directive 67/548/EEC	Regulation (EC) No 1272/2008	
Cyfluthrin	68359-37-5 269-855-7	T+; R28 T; R23 N; R50/53	Acute Tox. 3, H331 Acute Tox. 2, H300 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	5.00
Solvent Naphtha (petroleum), light aromatic	64742-95-6 265-199-0	R10 Xi; R37 Xn; R65 R66 R67 N; R51/53	Flam. Liq. 3, H226 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	> 1.00 – < 10.00

Further information

For the full text of the R-phrases/ Hazard statements mentioned in this Section, see Section 16.

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SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures**

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.
Skin contact	Immediately wash with plenty of soap and water for at least 15 minutes. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. 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. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Local:, Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, Sneezing Systemic:, Discomfort in the chest, Tachycardia, Hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Dizziness, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyperreaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy
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4.3 Indication of any immediate medical attention and special treatment needed

Risks	This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.
Treatment	Local treatment: Initial treatment: symptomatic. Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.

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SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media****Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**Unsuitable** High volume water jet**Hazchem Code** 3Z**5.2 Special hazards arising from the substance or mixture** In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx)**5.3 Advice for firefighters****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.**Further information** Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures****Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.**6.3 Methods and materials for containment and cleaning up****Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.**6.4 Reference to other sections** Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling****Advice on safe handling** Use only in area provided with appropriate exhaust ventilation. For personal protection see section 8.**Advice on protection against fire and explosion** No special precautions required.**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Shower or bathe at the end of working. Remove soiled clothing immediately and clean thoroughly before using again.

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Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

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

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

Suitable materials Coex EVOH (1000L IBC)

7.3 Specific end uses Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Cyfluthrin	68359-37-5	0.01 mg/m ³ (TWA)		OES BCS*

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2 Exposure controls**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

Respiratory protection is not required under anticipated circumstances of exposure.
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 of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and 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 coveralls and Category 3 Type 4 suit.
If there is a risk of significant exposure, consider a higher protective type 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.

General protective measures

If product is handled while not enclosed, and if contact may occur:
Complete suit protecting against chemicals

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Form	Liquid
Colour	white to light beige
Odour	aromatic
pH	2.5 - 3.5 at 100 % (23 °C)
Freezing temperature	-1 °C
Boiling point/boiling range	ca. 100 °C
Flash point	Not relevant; aqueous solution
Ignition temperature	> 600 °C
Vapour pressure	27 hPa at 20 °C 134 hPa at 50 °C 170 hPa at 55 °C
Density	ca. 1.01 g/cm ³ at 20 °C
Water solubility	emulsifiable
Viscosity, kinematic	19.1 mm ² /s at 20 °C
Surface tension	51 mN/m at 40 °C
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity****Thermal decomposition** Stable under normal conditions.**10.2 Chemical stability** Stable under recommended storage conditions.**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.**10.5 Incompatible materials** Store only in the original container.**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute oral toxicity** LD50 (rat) 2,113 mg/kg**Acute inhalation toxicity** LC50 (rat) > 7.576 mg/l

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	Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration.
Acute dermal toxicity	LD50 (rat) > 5,000 mg/kg
Skin irritation	Slight irritant effect - does not require labelling. (rabbit)
Eye irritation	Slight irritant effect - does not require labelling. (rabbit)
Sensitisation	Sensitising (mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment repeated dose toxicity

The toxic effects of Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment Mutagenicity

Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Cyfluthrin is related to parental toxicity.

Assessment developmental toxicity

Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Cyfluthrin are related to maternal toxicity.

Further information

No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to aquatic invertebrates	EC50 (Water flea (<i>Daphnia magna</i>)) 0.00016 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient.
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Toxicity to aquatic plants	IC50 (<i>Desmodium subspicatus</i>) > 10 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient. No acute toxicity was observed at its limit of water solubility.
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12.2 Persistence and degradability

Biodegradability	Cyfluthrin: not rapidly biodegradable
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Koc	Cyfluthrin: Koc: 64300
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12.3 Bioaccumulative potential

Bioaccumulation	Cyfluthrin: Bioconcentration factor (BCF) 506 Does not bioaccumulate.
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12.4 Mobility in soil

Mobility in soil	Cyfluthrin: Immobile in soil
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PBT and vPvB assessment Cyfluthrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

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.

Contaminated packaging Not completely emptied packagings should be disposed of as hazardous waste.

Waste key for the unused product **020108** agrochemical waste containing dangerous substances

Legal basis

Waste key in accordance with Schedule I of the Hazardous Waste Rules, 2008 as amended (India - EP Act):

29.1 Process wastes/residues

29.3 Date-expired and off-specification pesticides

SECTION 14: TRANSPORT INFORMATION**ADR/RID/ADN**

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYFLUTHRIN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
Hazchem Code	3Z
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYFLUTHRIN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

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14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYFLUTHRIN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Further information**

WHO-classification: III (Slightly hazardous)

Labeling according to Insecticide Rules 1971 as amended. (INDIA)Class II: Highly toxic
Colour: bright yellow
Poison!
Keep out of the reach of children.**15.2 Chemical Safety Assessment**

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION**Text of R-phrases mentioned in Section 3**

R10	Flammable.
R23	Toxic by inhalation.
R28	Very toxic if swallowed.
R37	Irritating to respiratory system.
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.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Text of the hazard statements mentioned in Section 3

H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H304	May be fatal if swallowed and enters airways.
H331	Toxic if inhaled.



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H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 453/2010 amending Regulation (EU) No 1907/2006 (and any subsequent amendments). 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.

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