

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 of 18 December 2006 (REACH)

ESFENVALERATE 2.5 EC

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

Product label names SVEN
Esfenvalerate, 2.5% emulsifiable concentrate
GIFAP Code : EC

Use Insecticide (agricultural use)

Supplier Interfarm (UK) Ltd
36, Newgate Street, Doddington, Cambs PE15 0SR. UK.
Tel +(0)1354 741414

2. HAZARD IDENTIFICATION

Chemical description *Esfenvalerate 2.5% emulsifiable concentrate*
GIFAP Code : EC

Classified as hazardous according to EU directives 1999/45/EC, 2001/60/EC and 2006/8/EC:

Classification based on Tests



Symbol(s) HARMFUL (Xn) DANGEROUS FOR THE ENVIRONMENT (N)

R(isk) phrase(s) R10: Flammable
R20/22: Harmful by inhalation and if swallowed
R41: Risk of serious damage to eyes
R43: May cause sensitisation by skin contact
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S(afety) phrase(s) S16: Keep away from sources of ignition - No smoking.
S23: Do not breathe spray.
S24/25: Avoid contact with skin and eyes
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection
S38: In case of insufficient ventilation, wear suitable respiratory equipment
S60: This material and its container must be disposed of as hazardous waste
S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

Special risks and safety precautions (directive 91/414/EEC):

General provisions SP 1: Do not contaminate water with the product or its container (Do not clean application equipment near surface water).

Specific safety precautions SPo 2: Wash all protective clothing after use.
SPe 3: To protect aquatic organisms respect an unsprayed buffer zone of 5 m to surface water bodies.

Other hazards: May cause a transient itching and/or burning sensation in exposed human skin (paresthesia).

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is to be considered as a preparation in conformance to EC directives.

Information on ingredients :

Chemical description Esfenvalerate, 2.5% emulsifiable concentrate

Composition/Information on hazardous ingredients

Number	% w/v	CAS number	Chemical name
1	2.5	66230-04-4	(S)-.alpha.-Cyano-3-phenoxybenzyl (S)-2-(4-chlorophenyl)-3-methylbutyrate
2	10	(*)	Emulsifier
3	Balance	1330-20-7	Xylene

Number	EC number	Annex-1 number	Symbol(s)	Risk phrase(s)
1		650-033-00-5	N, T	R23/25, R43, R50/53
2	(*)		Xi	R10, R41
3	215-535-7	601-022-00-9	Xn	R10, R20/21, R38

Other information (*) All components are registered in EINECS/ELINCS
SCAE code : R707

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4. FIRST AID MEASURES

Symptoms and effects	May cause a transient itching and/or burning sensation in exposed human skin. Synthetic pyrethroids can produce paresthesia. Typically, symptoms begin several hours after cutaneous exposure, peaks within 12 hours and resolves within about 24 hours. Harmful by inhalation and if swallowed. Risk of serious damage to eyes. May cause sensitisation by skin contact.
First aid	
General	In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation	Move to fresh air. If symptoms persist, seek medical advice.
Skin	Remove contaminated clothing. Wash immediately with soap and water.
Eye	Rinse immediately and as long as possible with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Always seek medical advice.
Ingestion	Rinse mouth. Never induce vomiting in unconscious or confused persons. Seek medical advice.
Advice to physician	Symptomatic treatment is advised.

5. FIRE-FIGHTING MEASURES

Extinguishing media	Dry chemical powder, carbon dioxide, sand, foam.
Unsuitable extinguishing media	Water with full waterjet
Special exposure hazards	none known
Hazardous decomposition/combustion products	May emit toxic and irritating fumes under fire conditions.
Protective equipment	Wear self contained breathing apparatus. Wear suitable protective clothing and eye/face protection. See also section 8.
Other information	Water used to extinguish a fire should not be allowed to enter the drainage system or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Do not breathe spray. Avoid contact with skin and eyes. For personal protection see section 8.
Environmental precautions	Do not allow to escape into sewage system or water courses.
Methods for cleaning up	In case of spill (liquid), soak it up immediately with suitable absorbent such as sawdust or granular absorbent clay. Sweep up and dispose as waste following local regulations. Do not wash residues into drains or other waterways.

7. HANDLING AND STORAGE

Handling	The usual precautions for handling chemicals should be observed. For personal protection see section 8.
Fire and explosion prevention	Keep away from sources of ignition – No smoking. Prevent electrostatic discharges. Above the flash point an explosive mixture can be formed.
Storage requirements	Store in a dry and cool place. Keep container in a well-ventilated place. Keep away from heat. Keep container tightly closed.
Other information	Do not mix with water (except for the normal preparation).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls	Provide adequate ventilation.						
Exposure limits	No exposure limits have been established for this material. The following exposure limit(s) apply for:						
	<table><thead><tr><th>Name</th><th></th></tr></thead><tbody><tr><td>Xylene</td><td>OES-TWA 441.000 mg/m³ Can be absorbed through skin</td></tr><tr><td></td><td>OES-STEL 662.000 mg/m³ Can be absorbed through skin</td></tr></tbody></table>	Name		Xylene	OES-TWA 441.000 mg/m ³ Can be absorbed through skin		OES-STEL 662.000 mg/m ³ Can be absorbed through skin
Name							
Xylene	OES-TWA 441.000 mg/m ³ Can be absorbed through skin						
	OES-STEL 662.000 mg/m ³ Can be absorbed through skin						
Personal protection							
Respiratory	The usual precautions for handling chemicals should be observed.						
Hand	Wear protective gloves.						
Eye	Wear safety goggles or face shield.						
Skin and body	Wear suitable protective clothing.						
Other information	Launder clothes before reuse.						

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	clear liquid
Colour	pale yellow
Odour	faint characteristic
Boiling point/range	not determined
Melting point/range	not applicable
Flash point	27 °C (Tagliabue closed cup)
Flammability	flammable
Autoignition temperature	500 °C (xylene)
Explosive properties	vapours may form explosive mixtures with air
Explosion limits	1.1 – 6.1 vol % (xylene)
Oxidising properties	not applicable (liquid)
Vapour pressure	not determined
Density	0.894 g/ml (20°C)
Bulk density	not applicable
Solubility in water	emulsifiable in water (solubility of Esfenvalerate: < 0.001 mg/l, 20°C)
Solubility in other solvents	not applicable
pH value	5.2 (1% in water)
Partition coefficient n-octanol/water	not determined (Esfenvalerate: log Pow = 6.24, 25°C)
Relative vapour density (air = 1)	not determined
Viscosity	1.2 mPa.s (20°C)
Surface tension	40.9 mN/m (20°C)

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	Avoid high temperature. Keep away from sources of ignition – No smoking.
Materials to avoid	Alkaline materials.
Hazardous decomposition products	May emit toxic and irritating fumes under fire conditions (see also section 5).

11. TOXICOLOGICAL INFORMATION

Name	<i>Esfenvalerate 2.5% emulsifiable concentrate</i>
Acute toxicity	
Oral LD50	rat: 436 mg/kg
Dermal LD50	rat: >2000 mg/kg
Inhalation	rat (4 hours, whole body): 4.8 mg/l
Irritation	
Skin	moderately irritating (but not classified according to EU Directive 2001/59/EC)
Eye	severely irritating
Sensitisation	sensitising (maximisation test)
Other toxicological information	Active substance (<i>Esfenvalerate technical grade</i>) : - genotoxicity: negative in all tests - teratogenicity, toxicity for reproduction: negative - oncogenicity: negative - temporary signs of neurotoxicity in rats (90-d study) at dose levels > 3 mg/kg/day.

12. ECOLOGICAL INFORMATION

No experimental ecological data are available on the preparation as such. The following data are applicable to a close formulation or ingredient(s) listed below:

Name	<i>Esfenvalerate, 5% emulsifiable concentrate</i>
Ecotoxicity	
Fish	Acute toxicity, 96h-LC50 (<i>Oncorhynchus mykiss</i>) : 4.5 µg/l 21 days-LC50 (<i>Oncorhynchus mykiss</i>) : 0.36 µg/l (No Observed Effect Concentration (NOEC) : 0.18 µg/l)
Daphnia	Acute toxicity, 48h-EC50 (<i>Daphnia magna</i>) : 3.4 µg/l (static) Reproduction test, 21d-EC50 (<i>Daphnia magna</i>) : 0.41 µg/l (No Observed Effect Concentration (NOEC) : 0.056 µg/l)
Algae	Acute toxicity (<i>Scenedesmus subspicatus</i>) : 96h -EC50 (biomass) : 0.135 mg/l ; 24-48h EC50 (growth rate): 0.215 mg/l (No Observed Effect Concentration (NOEC) : 0.05 mg/l)
Bees	Acute toxicity, 48h-oral LD50 (<i>Apis mellifera</i>) : 0.21 µg a.s./bee Acute toxicity, 48h-contact LD50 (<i>Apis mellifera</i>) : 0.07 µg a.s./bee Not expected to present a significant risk to honey bees under field conditions.
Earthworm	Acute toxicity, 14d-LC50: 212.5 mg/kg soil (i.e.10.6 mg a.s./kg soil)

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Name	<i>Esfenvalerate, technical grade</i>
Ecotoxicity	
Birds	Acute toxicity, LD50 (Mallard duck): > 2250 mg/kg b.w. Acute toxicity, LD50 (Bobwhite quail): 1312 mg/kg b.w.
Fate	
Degradation Abiotic	pH5: DT50 = 129 days at 25°C pH7: DT50 = limited hydrolysis pH9: DT50 = 65 days at 25°C
Degradation Biotic	Not readily biodegradable
Bioaccumulation	Partition coefficient n-octanol/water log Pow : 6.24 (25°C) Bio Concentration Factor (BCF), exposure 28 days (<i>Cyprinus carpio</i>): 2850 – 3650 (deuration time: CT50 = approx. 7 - 8 days)

13. DISPOSAL CONSIDERATIONS

Product	According to local regulations. For further advice contact manufacturer.
Contaminated packaging	According to local regulations.

14. TRANSPORT INFORMATION

Land transport ADR/RID

ADR/RID class	3	Packing group	II
Label(s)	3	Substance Identification no.	1993
Hazard Identification no.	33	UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (contains: approx. 85% xylene)		

Sea transport IMO/IMDG code

Class	3	UN number	1993
Marine pollutant	yes	Packing group	II
EMS	F-E, S-E		
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (contains: approx. 85% xylene)		

Air transport ICAO-TI/IATA-DGR

Class	3	UN number	1993
		Packing group	II
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (contains: approx. 85% xylene)		

15. REGULATORY INFORMATION

See hazard identification in section 2.

As appropriate, the classification is based on:

- directive 2001/59/EC (results of the experimental studies),
- directives 1999/45/EC, 2001/60/EC, 2006/8/EC (classification based on the concentration of active substance and ingredients),
- directive 2003/82/EC for pesticides (special risks and safety precautions).

The safety data sheet is written according to Regulation (EC) No 1907/2006 of 18 December 2006 (REACH).

16. OTHER INFORMATION

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

Full text of risk phrase(s) used in this document:

- R10: Flammable
- R20/21: Harmful by inhalation and in contact with skin
- R20/22: Harmful by inhalation and if swallowed
- R23/25: Toxic by inhalation and if swallowed
- R38: Irritating to skin
- R41: Risk of serious damage to eyes
- R43: May cause sensitisation by skin contact
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

History :	Date of previous version	2 May 2006 (revision 2.00)
	Date of revision	15 May 2007
	Revision	3.00

Changes were made in sections nos 2, 3, 5, 12, 14, 15, 16, according to new data and changes in the regulations.