



## MATERIAL SAFETY DATA SHEET

PRODUCT : Bifenthrin Technical

PRODUCT DESIGNATION : Insecticide

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### Section 1. Product & Company Identification

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Common Name : Bifenthrin Technical

Grade : Technical

Active Ingredient : Bifenthrin

Chemical Name of Active Ingredient (IUPAC) : 2-methyl-3-phenylbenzyl (1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate

Chemical Family of A. I. : Pyrethroid

Molecular Formula of A. I. :  $C_{23}H_{22}ClF_3O_2$

Molecular Mass of A. I. : 422.88

Manufacturer & Supplier : **M/s PERFECT SOLUTIONS**  
**Office Add:** B-371, Paschim Vihar, New Delhi - 110063 (India)  
**Factory Add:** 15/1, 15/2, 15/3 Industrial Estate, Vidisha - 464001 (M.P)

Telephone Number : +91 8375844625

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### Section 2. Composition / Information on Ingredients

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Identity	% W/W content
Bifenthrin a.i.	92.00
Other Ingredients	Q.S to make
<b>Total</b>	<b>100.00 % w/w</b>



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## Section 3. Hazards Identification

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### Emergency Overview

**Appearance and odour:** Off-white and Slightly Sweet Odour.

**Warning Statements:** Keep out of reach of children

**Potential Health Effects Likely Routs of Exposure:** Skin contact, Inhalation and Ingestion.

**Eye Contact:** May cause slight irritation and redness to eye

**Skin contact:** Not irritating to skin but irritation may occur on prolonged contact

**Ingestion:** If swallowed, this substance is considered to be toxic and likely to cause damages to internal organs.

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## Section 4. First Aid Measures

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### Emergency and First Aid Procedure –

**If in Eyes:** Flush with plenty of water. Get medical attention if irritation occurs and persists..

**If on Skin:** Wash with plenty of soap and water.

**If Inhaled:** Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

**If Swallowed:** Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with a finger. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.

**Note to Physician:** Bifenthrin is moderately toxic if swallowed and has low dermal and inhalation toxicity. It is non-irritating to the skin and practically non-irritating to the eyes. Bifenthrin has high toxicity by the ingestion route of exposure. Gastric lavage using an endotracheal tube may be preferred to vomiting. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

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## Section 5. Fire Fighting Measures

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**Extinguishing Media:** Foam, CO<sub>2</sub> or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

**Fire/Explosion Hazards:** Slightly combustible. This material may support combustion at elevated temperatures.



**Fire Fighting Procedures:** Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

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## Section 6. Accidental Release Measures

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Wear protective gloves/protective clothing/eye protection/face protection.

**Steps to be taken in case of a spill:** Evacuate non essential personnel. Eliminate ignition source. Ventilate area. Absorb spills with inert material such as clay, sand, earth, sawdust etc. and collect in a drum. Cover up the contaminated area with household detergent and a small amount of water. Brush the slurry and spread inert absorbents on the slurry liquid and collect the absorbed material in a drum. Seal drum and dispose of. Do not contaminate water resources.

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## Section 7. Handling & Storage

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**Precautions in Handling:** When handling the product, preparing and using spray wear: - chemical resistant overalls with hood, buttoned to the neck. - elbow length PVC neoprene or nitrile gloves. - goggles. - half faced respirator with suitable filter for organic solvent vapours. Remove contaminated clothing immediately and wash thoroughly. Wash hands, face and arms immediately after use and before eating and drinking.

**Precautions in Storage:** Keep out of direct sunlight and provide adequate ventilation. Avoid contact with strong acids /caustics.

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## Section 8. Exposure Control, Personal Protection

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**Personal Protection:** - Chemical resistant overalls with hood, buttoned to the neck. - elbow length PVC neoprene or nitrile gloves. - Goggles. - Half faced respirator with combined dust/toxic vapour cartridge. Remove contaminated clothing immediately and wash thoroughly. Wash hands, face and arms immediately after use and before eating and drinking.

**Protective Gloves:** Wear heavy duty appropriate gloves

**Eye Protection:** Wear eye protection, goggles

**Skin Protection:** Wear protective gloves and protective clothing.

**Engineering Control:** Local exhaust ventilation.



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## Section 9. Physical and Chemical Properties

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Appearance / state	:	Waxy Solid
Colour	:	Off white
Odour	:	Slightly Sweet odor
Melting point	:	70°C
Specific gravity	:	1.21 @ 25°C
Vapour pressure	:	0.0178 mPa at 25°C
pH	:	5.4-6.0 @ 25°C
Density	:	1.26 g/l at 20°C
Flash Point	:	165°C

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## Section 10. Stability & Reactivity

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**Chemical Stability:** Product is stable under ambient conditions of storage

**Materials to Avoid:** Avoid contact with alkaline materials.

**Hazardous Decomposition Product:** Carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride.

**Hazardous Polymerisation:** Will not occur.

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## Section 11. Toxicological Information

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Oral LD50: Rat (male/female), 54.5mg/kg

Skin Contact, Dermal LD50: Rat (male / female) >2000mg/kg

Inhalation, LC50: Rat (male / female) > 1.01 mg/L (4 hours)

Skin Irritation: Rabbit, Non-Irritant

Eye Irritation: Rabbit, Non-Irritant

Skin Sensitization: Guinea Pig, Non-Sensitizing

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## Section 12. Ecological Information

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Acute Oral Toxicity in Birds: In Bobwhite quail >4450 mg/kg of body weight

Acute Toxicity in Fish (96 hrs LC<sub>50</sub>) : Rainbow trout : 0.00015 mg/L

Acute Toxicity Honey bees: Oral LC50 48 Hrs. 0.1 µg/bee



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## Section 13. Disposal Consideration

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**Waste Treatment Methods:** Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

**Containers:** Non-returnable containers that held this material should be cleaned, prior to disposal, by triple rinsing. Containers which held this material may be cleaned by being triplerinsed, and recycled, with the rinsate being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

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## Section 14. Transport Information

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The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Toxic substances under the applicable, ICAO/IATA, IMO, ADG.

### IMDG Classification

Shipping name : Pyrethroid pesticide, Solid, toxic,

Class : 6.1

Packing group : III

UN number : 3349

Marine pollutant : Yes

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## Section 15. Regulatory Information

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Contains: Bifenthrin

EC Symbols: T (Toxic), N (Dangerous for the environment)

Risk Phrases: R25 and R50/53

Safety Phrases: S1/2, S29 and S45

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## Section 16. Other Information

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All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are resented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS. Accordingly, no guarantee or warrantee expressed or implied is made by PERFECT SOLUTIONS, as to the results to be obtained based upon the user's use of the information, nor does PERFECT SOLUTIONS, assume any liability arising out of user's use of the information.

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