



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Fipronil Technical
CAS No : 120068-37-3
Use : Insecticide
Company Info : M/s HPM Chemicals & Fertilizers Ltd
209-210, Anupam Bhawan, Commercial Complex
Azadpur, Delhi-110033
Telephone : (011)-45071800, 899
Fax : (011)- 27681800
Website : www.hpmindia.com
E-mail : info@hpmindia.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition	Concentration
Imidacloprid a.i.	95.00% min.
Other associates impurities	05.00% max

3. HAZARDS IDENTIFICATION OF PREPARATION

Acute Health effects

Swallowed: 79 mg/kg (male); 56 mg/kg (female) (rat).

Dermal: 632-696 mg/kg (rat).

Inhalation: 0.06 mg/l air (4 h)

Acute exposure effect: Apathy, myatonia, difficult breathing, tremor and in cases of severe intoxication, myospasms.

Emergency treatment: If inhaled, remove victim to fresh air or uncontaminated area. If in eyes, flush with water. If on skin, wash with soap and water. Remove contaminated clothing. See a doctor if irritation persists. If swallowed, induce vomiting by touching back of throat with finger or by giving an ounce of syrup of ipecac with 2 glasses of water. Do not give anything by mouth to an unconscious person.

STEL (ACGIH) DNA IDLH DNA

NFPA Hazard signals: Health=1, Fire=1, Reactivity=1

4. FIRST AID MEASURES

Skin Contact : Remove contaminated clothing and shoes immediately.
Wash contaminated area with soap or mild detergent and large amount of water until no effects of chemical remains. If symptoms persists get medical help.

Eye Contact : Irrigate the eyes with large amount water or normal saline



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- occasionally lifting upper and lower lids until no evidence of chemical remains and obtain a medical help.
- Ingestion** : Remove by gastric lavage and catharsis, maintain blood pressure and airway, Give oxygen if respiration is depressed. Do not perform gastric lavage if victim is unconscious. Get medical attention immediately.
- Inhalation** : Remove the patient from the exposure area to fresh air immediately. If breathing has stopped perform the artificial respiration. Keep person warm and rest. Get medical attention immediately.

5. ACCIDENTIAL RELEASE

- Personal Preparation** : Avoid contact with skin, eyes and clothing.
- Environmental Precautions** : Prevent contamination of soil, drains and surface water.
- Method of cleaning** : Absorb the material in the sand, soil, diatomaceous earth or suitable absorbent. Place in suitable material and remove to safe place or dispose of in an incinerator approved for chemicals.

6. FIRE-FIGHTING MEASURES

- Suitable Extinguishing Media** : Dry chemical, CO₂, Water spray, standard foam. For larger fire, use water spray, fog or standard foam.
- Exposure Hazards** : During a fire, irritating and possibly toxic gases like carbon dioxide; carbon monoxide; nitrogen oxides; sulfur dioxide; hydrogen chloride; may be generated by thermal decomposition or combustion
- Fire-Fighting** : Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate non essential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.



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7. HANDLING AND STORAGE

- Handling** : Use appropriate (impervious) clothing, gloves and closed foot ware to prevent the repeated contact with skin. Use flash proof and dust resistant goggles to prevent the contact with eyes.
- Storage** : Keep the product in original container tightly closed and correctly labeled. Store in suitable, cool, dry, well ventilated place under lock and key; away from the reach of the children, animals, food and animal feeding stuffs. Store away from the incompatible substances and source of ignition

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Technical protective measures** : None
- Exposure controls limits** : Not Established
- Respiratory protection** : Wear suitable mask
- Hand protection** : Wear impervious gloves
- Eye protection** : Wear flash proof and dust resistant goggles.
- Skin protection** : Wear impervious clothing and closed foot ware.

9. PHYSICAL AND CHEMICAL PROPERTIES

Technical grade fipronil is a white powder with a moldy odor.
Vapor pressure_{1,2}: 2.8×10^{-9} mmHg at 25 °C
Octanol-Water Partition Coefficient (K_{ow})_{1,2}: 1.00×10^4
Henry's constant₁: 3.7×10^{-5} atm·m³/mol
Molecular weight₁: 437.2 g/mol
Solubility (water)₁: 0.0019 g/L (pH 5); 0.0024 g/L (pH 9) at 20 °C
Soil Sorption Coefficient (K_{oc})₃: The average K_{oc} value for fipronil when tested in eight soil types was 825 ± 214 , and the K_{oc} values for fipronil-sulfide and fipronil-desulfinyl were 3946 ± 2165 and 2010 ± 1370 , respectively.

10. STABILITY AND REACTIVITY

Chemical stability: Stable to light.
Reactivity: Stable at hydrolysis at pH 5-11.
Incompatible with other material: None known
Hazardous reaction product: HCl, HCN, CO.



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11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity

male/female combined rat: LD50: > 5,000 mg/kg

Acute Dermal Toxicity

male/female combined rabbit: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity

male/female combined rat: LC50: > 5.2 mg/l

Exposure time: 4 h

Determined in the form of a respirable fine dust.(actual)

male/female combined rat: LC50: > 20 mg/l

Exposure time: 1 h

Determined in the form of a respirable fine dust.

Extrapolated from the 4 hr LC50.(actual)

Skin Irritation rabbit: No skin irritation.

Eye Irritation rabbit: Mild eye irritation.

Sensitization guinea pig: Non-sensitizing.

Chronic Toxicity

Fipronil caused liver, kidney or thyroid effects and/or neurobehavioral effects (e.g., tremors) in chronic toxicity studies in rats and dogs. Fipronil did not induce any microscopic lesions in the neural tissues.

Assessment Carcinogenicity

Fipronil has been classified by EPA as a Category C carcinogen based on thyroid tumors in rats only. These tumors are produced by a mechanism which is not relevant to human cancer.

Fipronil did not produce an increase in tumor incidence in mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Reproductive &

Developmental Toxicity

REPRODUCTION: Fipronil was not considered a primary reproductive toxicant in rats.

DEVELOPMENTAL TOXICITY: Fipronil was not a developmental toxicant in rats and rabbits.

Neurotoxicity

Fipronil caused transient neurobehavioral effects (e.g., tremors) in neurotoxicity studies in rats. Delays in developmental landmarks were observed in rats at maternally toxic doses.



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Mutagenicity

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

12 ECOLOGICAL INFORMATION

Toxicity to Fish Lepomis macrochirus (Bluegill sunfish) vflow-through test LC50: 85 µg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient fipronil.

Rainbow trout (Oncorhynchus mykiss)

flow-through test LC50: 248 µg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient fipronil.

Acute Toxicity to Aquatic

Invertebrates

Daphnia

flow-through test

EC50: 190 µg/l

Exposure time: 48 h

The value mentioned relates to the active ingredient fipronil.

Toxicity to other

organisms

Mallard duck

LC50: > 5,000 mg/kg

Exposure time: 8 d

The value mentioned relates to the active ingredient fipronil.

Bobwhite quail

LC50: 48 mg/kg

Exposure time: 8 d

The value mentioned relates to the active ingredient fipronil.

Environmental

Precautions

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.

13. DISPOSAL CONSIDERATION

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed on site (by use according to the label) or at an approved waste disposal facility. Further information can be obtained from the EPA or the equivalent state and local agencies.

CONTAINER DISPOSAL: Completely empty bag into application equipment. Check with EPA, State, and local authorities for the current regulations applicable to your area for disposal of



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waste containers.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not regulated for Domestic Surface Transportation

FREIGHT CLASSIFICATION:

Insecticides or Fungicides, N.O.I.; other than poison

15. REGULATORY INFORMATION

EPA Registration No. 432-1217

US Federal Regulations

TSCA list

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

None.

Canadian Regulations

Canadian Domestic Substance List

None.

16. OTHER INFORMATION

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 presented 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 produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.