

MATERIAL SAFETY DATA SHEET OF

FIPRONIL 5% SC

1. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Supplier: Shanghai Bosman Industrial Co., Ltd.

Street address: Room 1804, No.1611, North Sichuan Road, Hongkou District, Shanghai, P.R. China.

FAX: +86 21 63065878

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Product name: Fipronil 5% SC

2. COMPOSITION/INFORMATION ON INGREDIENTS

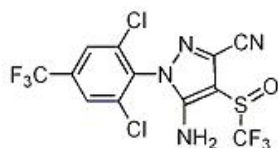
Formulation Type: Suspension concentrate (SC)

IUPAC: (±)-5-amino-1-(2,6-dichloro- α , α , α -trifluoro-p-tolyl)-4-trifluoromethylsulfinylpyrazole-3-carbonitrile

Molecular Formula: C₁₂H₄Cl₂F₆N₄OS

Molecular Weight: 437.2

Structural Formula:



Other ingredients determined not to be hazardous

INGREDIENT	CAS NO	PROPORTION
Fipronil	120068 - 37 - 3	5% min.
Inerts	Not available	Balance

3. HAZARDS IDENTIFICATION

Emergency overview: Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

Health and Environmental: Harmful if inhaled. Can cause slight eye and skin irritation.

Product is a skin sensitizer.

Hazardous Decomposition Products: May decompose at high temperatures forming toxic gases.

Unusual Fire, Explosion and Reactivity Hazards: This powder is a combustible powder and like all combustible powders can ignite, burn and form explosive mixtures with air if not handled correctly. Mixtures of powder in air with flammable solvent vapours should be avoided. This product has minimum ignition energy between 10 and 30 millijoules. Static electricity, mechanical sparks, open flames and certain hot surfaces can serve as ignition sources for this material. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

4. FIRST AID MEASURES

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation: Move person to fresh air. If person is not breathing, call local emergency call or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.

Eye contact: Hold eye open and rinse slowly and gently with water 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continuing rinsing eye. Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN

There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Over-exposure to materials other than this product may have occurred. In severe cases of over-exposure by oral ingestion lethargy muscle tremors and in extreme cases possibly convulsions may occur. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

Flash point : Not applicable

Flammable limits : Not applicable

Extinguishing media: Water spray, CO₂, foam, dry powder.

Fire and explosion hazards: Pesticide fires have potential to emit hazardous gases such as carbon

monoxide, carbon dioxide, hydrogen fluoride, hydrogen chloride, nitrogen oxides, sulfur oxides, acid halides. If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

Fire-fighting procedures : Isolate fire area and evacuate downwind. DO NOT breathe gases, smoke or vapors generated. Wear self-contained breathing apparatus and full-protective clothing.

Hazardous decomposition products : May release irritating and toxic gases due to thermal decomposition.

6. ACCIDENT RELEASE MEASURES

Take appropriate protective measures. Wear positive pressure self-contained breathing apparatus (SCBA). Clear area. Dike spillage. Do not touch or walk through spilled material. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Prevent entry into waterways, sewers, basements or confined areas.

7. HANDLING AND STORAGE

Precautions to be taken in handling: Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Carefully open containers and after partial use close container tightly.

Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Precautions to be taken in storage: Store unused product in original container only out of reach of children and animals.

Storage temp.: Normal ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hand protection : Chemical-resistant gloves.

Skin protection : Long-sleeve shirt, long pants, shoes plus socks.

Eye protection : Protective eyewear or chemical safety glasses with side shields or chemical goggles when working in non-ventilated spaces.

Respiratory requirements : If handling without sufficient ventilation, wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C0 or a NIOSH approved respirator with any N, R, P or

HE class filter.

Ventilation : Whenever possible, adequate ventilation should be used to minimize the need for personal protective equipment.

Additional protective measures:

Follow manufacturer' s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them.

User safety recommendations:

Users Should: Wash hands before eating, drinking, and chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Exposure guidelines : Refer to Section 3.

Engineering controls : Minimize airborne concentrations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white liquid

pH: 5-8

Density: NA

Solubility: Suspension in water

10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.

Conditions to avoid: Strong oxidizing agents. Avoid excessive heat.

Hazardous decomposition products: May release irritating and toxic gases due to thermal decomposition.

Hazardous polymerization : Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute oral LD50 for rats 92 mg/kg.

Skin and eye Acute percutaneous LD50 for rats >2000, rabbits 354 mg/kg.

Not a skin or eye irritant (OECD criteria).

Not a skin sensitiser.

Inhalation LC50 (4 h) for rats 0.39 mg/l (tech.; nose only exposure).

Chronic toxicity

NOEL (2 y) for rats 0.5 mg/kg diet (0.019 mg/kg b.w.); (18 mo) for mice 0.5 mg/kg diet; (52 w) for dogs 0.2 mg/kg b.w. daily (combined sexes).

Other

Non-mutagenic, non-teratogenic; no adverse effect on reproductive performance. Clinical signs of toxicity consistent with the interaction of the molecule at a neurotransmitter receptor were observed in all species tested, but were completely reversible.

12. ECOLOGICAL INFORMATION

Birds Acute oral LD50 for bobwhite quail 11.3, mallard ducks >2000, pheasants 31, red-legged partridges 34, house sparrows 1120, pigeons >2000 mg/kg. Dietary LC50 (5 d) for bobwhite quail 49, mallard ducks >5000 mg/kg diet.

Fish Acute LC50 (96 h) for bluegill sunfish 85, rainbow trout 248, European carp 430 µg/l.

Daphnia LC50 (48 h) 0.19 mg/l; for *D. carinata* (48 h) 3.8 mg/l.

Algae EC50 (96 h) for *Scenedesmus subspicatus* 0.068 mg/l; (120 h) for *Selenastrum capricornutum* >0.16, *Anabaena flos-aquae* >0.17 mg/l.

Bees Highly toxic to honeybees, both by direct contact and by ingestion. However, no risk to bees when used as a soil or seed treatment.

Worms Non-toxic.

13. DISPOSAL CONSIDERATION**Pesticide and container disposal:**

Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

Empty the container of excess product into the mixing tank or spray tank of the applicator. Destroy the emptied containers by perforation and flattening. Bury in an approved dumpsite. Do not re-use the empty



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container for any other purpose. Comply with any local legislation applying to disposal.

Prevent contamination of food, feedstuffs, drinking water and eating utensils.

14. TRANSPORT INFORMATION

UN Number: 3082

UN Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Fipronil)

Transport hazard class: 9

Packing group: III

15. REGULATORY INFORMATION

Follow all local and international laws and regulations

16. OTHER INFORMATION

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact this company.

-- END OF MSDS --