

## Material Safety Data Sheet

### **1. IDENTIFICATION OF SUBSTANCE:**

Trade name: Fipronil

Manufacturer/Supplier:

CHANGZHOU BOOMING CROP SCIENCE CO.,LTD

NO.2, BUILDING 53,HUNDSUN SCIENCE &TECHNOLOGY

PARK,BEITANGHE ROAD,TIANNING DISTRICT, CHANGZHOU, JIANGSU,

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Phone: 86-519-68208602

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### **2. COMPOSITION/DATA ON COMPONENTS:**

Ingredient	CAS No.	Content (g/kg)
Fipronil	120068-37-3	800
Other ingredients (non-hazardous)		200

### **3. HAZARDS IDENTIFICATION:**

Risk & Safety Phrases: Not applicable.

### **4. FIRST AID MEASURES:**

Description of necessary first aid measures: In case of poisoning by any exposure route contact the Poisons Centre.

Workplace facilities: Ensure washing facilities are available.

Symptoms: Signs and symptoms observed in the few cases of human poisoning in literature are nausea, vomiting, profuse sweating, drowsiness, agitation, coma and seizures (severe cases).

Eye: Immediately rinse with copious quantities of water for at least 15 minutes. Seek medical assistance.

Skin: Remove contaminated clothing. Wash affected areas with plenty of soap and water.

Inhaled: Due to nature of the product, inhalation is unlikely.

Ingestion: If swallowed, do not induce vomiting. Contact a doctor and follow the advice given. Keep under medical supervision.

Treatment: Fipronil is a reversible gamma-aminobutyric (GABA) receptor inhibitor. During intoxication it will induce neurological stimulation with possible convulsions. As no antidote is known, treatment should be symptomatic. Carefully monitor respiratory functions. Artificial respiration and/or oxygen may be necessary. Against convulsions: give diazepam. For adults 5-10 mg intravenously as necessary until fully sedated; for children 2.5 mg i.v. Due to slow absorption of fipronil through the gut,

symptoms of intoxication may be delayed several hours to one day. Absorption may be decreased by the use of gastric lavage, saline purgative and activated charcoal. Continue monitoring patient for at least 48 hours.

#### **5. FIRE FIGHTING MEASURES:**

##### **SUITABLE ExTINGUISHING MEDIA:**

Decomposition: In the event of fire, hydrogen chloride (HCl), hydrogen fluoride and oxides of carbon (CO), nitrogen (NO<sub>x</sub>) and sulphur can be released.

Extinguishing media: Carbon dioxide, dry agent, water spray, foam.

Recommended protective clothing: Fire fighters should wear full protective clothing and self-contained breathing apparatus. Do not release contaminated water into the environment. Keep intact containers cool by spraying with water. Keep people away and upwind.

#### **6. ACCIDENTAL RELEASE MEASURES:**

Personal precautions: *Emergency Procedures:* Avoid contact with spilled material or contaminated surfaces. When dealing with the spillage do not eat, drink or smoke.

Wear suitable personal protection during removal of spillages. This means wearing eye protection, chemically resistant gloves, boots and overalls.

Environmental precautions: Prevent spillage from entering drains, sewers or watercourses. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

Procedure for spill: Keep all bystanders away. Wear goggles, full length clothing and PVC gloves.

Contaminated material must be disposed of in accordance with all local authority requirements. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

For quantities up to 50kg of product bury in a secure approved landfill site.

For quantities greater than 50kg seek advice from the manufacturer (use emergency contact number) before attempting disposal. Collect and transfer the product into a properly labeled and tightly closed container. Contain in a secure location until disposal method is established.

Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.

#### **7. HANDLING AND STORAGE:**

Handling practices: Keep out of reach of children. Avoid contact with eyes, skin and clothing.

Conditions for safe storage and store site requirements: Store in a cool, dry, well ventilated place and protect from sunlight. Avoid temperatures below 0°C or above 30°C.

Packaging: Store in original container, tightly closed, away from foodstuffs.

#### **8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:**

Engineering measures: Control process conditions to avoid contact.

Respiratory protection: Not required.

Clothing: Wear suitable protective gloves.

Eye protection: Not normally required. Avoid touching eyes while handling product.

Other protective equipment: None.

Hygiene measures: Avoid contact with eyes and skin. Keep away from food, drinks and tobacco. Wash hands after use.

#### **9. PHYSICAL AND CHEMICAL PROPERTIES:**

Color: Brown

Odour: Odourless

Vapour pressure:  $3.7 \times 10^{-4}$  mPa (25 °C) (technical fipronil)

Density: 1.64 at 20 °C (technical fipronil)

Viscosity: Not available.

Solubility in water: ~2 mg/L (technical fipronil)

PH: Not available.

Flash point: Not available – not flammable.

Partition coefficient (noctanol/water):  $\log P = 4.0$  (shake flask method)

#### **10. STABILITY AND REACTIVITY:**

Stability of the substance: Stable under normal conditions of use.

Conditions to avoid: Extreme heat and fire.

Materials to avoid: None known.

Hazardous reactions: Thermal decomposition may produce toxic by-products of carbon and nitrogen.

Hazardous polymerization: Not applicable.

#### **11. TOXICOLOGICAL INFORMATION:**

Acute oral toxicity: LD50 rat: >5000 mg/kg (similar product)

Acute dermal toxicity: LD50 rabbit: >5000 mg/kg (similar product)

Acute inhalation toxicity: LC50 (4 h) rat: 0.682 mg/L (technical fipronil)

Inhalation: Not applicable.

Skin contact: May irritate the skin – not classified as an irritant.

Eye contact: May irritate the eyes – not classified as an irritant.

Ingestion: The product exhibits low toxicity by the oral route.

Other information: In a chronic toxicity study, rats receiving the highest dose of fipronil showed an increased incidence of thyroid tumours. The rat thyroid gland is very sensitive to chemicals and functions differently from the human thyroid, and therefore, fipronil is not considered to pose an increased risk of cancer to humans. Similar studies in mice and dogs did not show an increased incidence of thyroid tumours. Fipronil is not mutagenic and not teratogenic.

#### **12. ECOLOGICAL INFORMATION:**

Acute fish toxicity: LC50: (96h) 85 mg/L bluegill sunfish; 248 mg/L rainbow trout; 430 µg/L European carp (technical fipronil)

Daphnia toxicity: LC50: 0.19 mg/L daphnia (technical fipronil)

Bird toxicity: LD50: >2150 mg/kg mallard duck (technical fipronil)

Bee toxicity: Highly toxic to bees by direct contact and ingestion.

Other: Non-toxic to earthworms.

**13. DISPOSAL CONSIDERATION:**

Product disposal: Dispose of this product only by using according to the label, or at an approved landfill or other approved facility. Avoid contamination of any water supply with product or empty container.

Container disposal: Dispose of empty container by wrapping in paper, placing in plastic bag and putting in the garbage.

**14. TRANSPORT INFORMATION:**

Rail/Road (RID/ADR): Not applicable.

Sea (IMDG-Code): Not applicable.

Air (ICAO/IATA): Not applicable.

**15. 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 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.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.