

# Material Safety Data Sheet (MSDS)

## 1 Product and Company Identification

Chinese Name: Flies-killing Bait

English Name: Dinotefuran

Other names: Registered Trademark

Product Category: Health Pesticides

**Name of Enterprise:** Liaoning Dongfeng Daily Necessities Co., Ltd.

Address: Group Four, Shi'an Village, Tangshancheng Town, Zhen'an District, Dandong City, Liaoning Province

Postcode: **118000**

Company Tel.: (0086) -(0415)-(4107666)

Fax No.: (0086) -(0415) - (2143555)

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## 2 Composition/information on Ingredients [B]

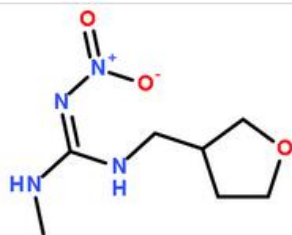
CAS No.: Dinotefuran      CAS Registration No.: 165252-70-0

Molecular formula: Dinotefuran molecular formula:  $C_7H_{14}N_4O_3$

Content: 0.1±0.03

Molecular weight: Dinotefuran molecular weight: 202.21 (Calculated as per 2001 International Relative Atomic Mass)

Structural formula: Dinotefuran structural formula:



Main physical and chemical properties: Technical material shall be white or light yellow powder.

Melting point (°C): 101-102°C .

Solubleness: ( g / L , 20°C): 39.8 in water; Hexane:  $9.0 \times 10^{-6}$ ; Heptane:  $11 \times 10^{-6}$ ; Xylene:  $72 \times 10^{-3}$ ; Toluene:  $150 \times 10^{-3}$ ; methylene chloride: 61; Acetone: 58 Ethanol: 19; Butyl acetate 5.2.

Stability: Stable under 150 °C.

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### **3 Hazards summarizing (mainly including the materials that may harmful to human & environment)**

Hazard category: Poisons

Exposure way: Digestive system (oral) contact.

Health hazard: a) The preparation has no obvious relationship with the length of exposure time.

b) Low toxicity.

c) Target organs. Stomach, eyes and skin.

d) Impact type. No data

e) Signs and symptoms. No irritation to rabbit eyes. No obvious stimulation on skin. No teratogenic, mutagenic, or carcinogenic effects on animals within the test dose.

Environmental hazards: It is harmful to the environment, which may pollute water bodies and the atmosphere

Explosion hazard: Non-flammable, without potential explosion hazard.

### **4 First-aid Measures [B]**

It refers to the brief treatment methods of self-rescue and mutual rescue for the on-site personnel who are injured by pesticide products accidentally

Skin contact: Take off the contaminated clothes, and wash the skin thoroughly with soap and water.

Eye contact: Open the upper and lower eyelids immediately, wash the eyes with the flowing clean water or normal saline for at least 15min, and seek medical advice.

Inhalation: Quickly run away from the working site to a place with fresh air. Keep the respiratory tract unobstructed. Perform oxygen therapy when having breathing difficulties. In case of no breath, take

artificial respiration immediately. Seek medical treatment.

Ingestion: Drink enough warm water to induce vomiting when the patients keep awake, and seek medical attention.

### **5 Fire-fighting Measures[B]**

Hazardous characteristic: Uninflammable. It will not react with water, acid, alkali and any active materials, but it can produce degradation, no oxidation and corrosion resistance.

Harmful combustion product: Carbon monoxide, carbon dioxide.

Firefighting measure: It should be stored in a cool, dry, ventilated warehouse, and be kept away from high temperature and combustion source.

Extinguishing precautions: a) Firefighters' individual protection: When entering the fire scene, they shall wear protective suits such as whole body fire protective suit, fire protection and anti-virus suit, fire protection boots, positive pressure self-contained breathing apparatus, etc.;

b) Firefighters shall wear breathing apparatus and stand upwind out of safe distance when extinguishing. Do not shoot the water directly to the liquid melt, so as to avoid serious flowing fire or severe boiling.

### **6 Accidental Release Measures[B]**

Emergency treatment: a) Promptly call the police, evacuate relevant personnel, isolate leaking contaminated areas, and restrict access. Cut off the fire source. It is suggested that the emergency response personnel should wear the anti-dust mask and chemical protective clothing. Do not contact the leakage directly.

b) Isolate the combustion source.

c) Emergency response personnel shall wear masks and working clothes, so as to avoid the spread of leakage and prevent it from being scattered on the ground, water pipes and

drainage systems.

d) Use wet sand or carbon dioxide dry powder to extinguish the fire.

e) Equipment and materials: Dry powder fire extinguishers or sandbox.

Elimination method: Sweep up, recycle, and pack the recyclable leakage and return to the factory for processing. For the ground residues that cannot be recycled, it can be covered with sand and absorbed, and then collected for a special waste treatment.

## **7 Handling and Storage[B]**

Operation precautions: Negative pressure or airtight operation, strengthen ventilation. The operating personnel must be trained specially, and strictly abide by the procedures. The operating personnel shall wear shawl caps, protective glasses, working clothes, protective gloves and face shields. They shall wash hands, face and exposed parts with water and soap after operation. Keep away from fire, heat source. Smoking or any behavior that can cause open flames is strictly prohibited in the workplace. Adopt ventilation systems and equipment, and the packaging equipment should be provided with grounding devices, so as to prevent lightning and static electricity. When handling, please gently load and unload, so as to prevent the medicine leakage and overspill caused by package damage.

Storage precautions: Store in a cool and ventilated warehouse. Keep away from fire, heat source. Direct Sunlight Shall Be Avoided. Seal the package. It shall be stored separately from oxidants, food, seeds, and feeding stuffs. Mixed storage is forbidden.

## **8 Exposure Controls/personal Protection[B]**

Maximum allowable concentration: Upon query, no related report

Monitoring method: High performance liquid chromatography:

Engineering control: Conduct operation in a closed or negative pressure system, strengthen ventilation, use mechanized automatic packaging as far as possible. Discharge workshop waste gas and sanitary water into environmental protection treatment devices for harmless treatment.

Respiratory system protection: Use filter type gas masks (half, full face masks) dust masks, etc.

Eye protection: Select safety goggles.

Body protection: To avoid damage to skin. Use general anti-virus clothes as per the toxicity of this

product.

Hand protection: Mainly select rubber gloves.

Other protection: Forbid smoking, eating and drinking in the workplace. Avoid drinking alcoholic beverages before working. Wash thoroughly after work, take a shower and change clothes.

Select low-temperature water when showering. Conduct pre-employment and regular physical examination.

## 9 Physical and Chemical Properties

Product appearance and property: Stable homogeneous gel, no visible foreign impurities. [A]

pH: 5.0~8.0[C]

Melting point (°C): 101-102oC [B]

Boiling point (°C): No data [B]

Density (20°C): Insignificance. [C]

Relative vapor density (air = 1): No data. [C]

Vapour pressure (kPa): No data. [C]

Heat of combustion ( kJ/mol): No data [C]

Critical temperature (°C): No data. [C]

Critical pressure (MPa): No data.

Octanol/water partition coefficient: No data [C]

Flash point (°C): Insignificance [B]

Self-combustion temperature: No spontaneous combustion [B]

Upper explosive limit % (V/V): No [B]

Lower explosive limit % (V/V): No [B]

Solubleness: ( g / L , 20°C): 39.8 in water; Hexane:  $9.0 \times 10^{-6}$ ; Heptane:  $11 \times 10^{-6}$ ; Xylene:  $72 \times 10^{-3}$ ;  
Toluene:  $150 \times 10^{-3}$ , methylene chloride: 61; Acetone: 58 Ethanol: 19; Ethyl acetate 5.2[B]

Main purposes: Health pesticides [B]

Other physical and chemical properties: None [C]

### 10 Stability and Reactivity[B]

Stability: At room temperature and dry conditions, it can be stored for two years without package being opened. Easy decomposition in alkaline medium.

Prohibited substance: Strong acid, strong alkali, strong oxidizing agents.

Avoided contact conditions: Avoid contacting with food, seeds, alkaline substances and flammable and explosive substances, and avoid storing in water and humid places.

Polymerization hazard: N/A.

Decomposition products: Carbon monoxide, carbon dioxide, etc.

### 11 Toxicological Information

Acute toxicity: Oral toxicity: Male/female rats  $LD_{50} > 5000 \text{mg/kg}$ , belonging to low toxicity;

Dermal toxicity: Male/female rats  $LD_{50}$  are all greater than  $2000 \text{mg/kg}$ , which is low toxicity

Sub-chronic toxicity: No data. [C]

Chronic toxicity: No data. [C]

Irritation: Mild irritation to special rabbits' eyes; No acute skin irritation to special rabbits. [B]

Sensitization: The acute skin sensitization rate of guinea pigs shall be grade I, which is a weak

sensitizer. [C]

Mutagenicity: No data. [C]

Teratogenicity: No data. [C]

Carcinogenicity: No data. [C]

Others: No data [C]

## 12 Ecological Information

Ecological toxicity: The substance is harmful to the environment, and it is recommended not to let it enter the environment. It may pollute water bodies and the atmosphere.

Biodegradability: [B]

Non-biodegradable: Slow degradation in water or sunlight. [B]

Bio-concentration or bio-accumulation: No data [C]

Other harmful effects: No data [C]

## 13 Disposal Considerations[B]

Property of waste: ☐ Hazardous wastes ☒ Solid wastes (packing materials)

Waste disposal methods: Disposal by an eligible waste disposal unit.

Precautions: The packaging should not be discarded carelessly, and the used container shall be properly disposed of. It should not be used for any other purposes, nor can it be thrown away freely, which shall be handled collectively

## 14 Transport Information[B]

Dangerous goods No.: No data.

① UN No.: No data.

② Packaging mark: Low toxicity.

③ Categories of packing: Class VI Poisoning Products.

④ Packing Method: It shall be packaged in aluminum foil bags, and the outer packaging shall adopt corrugated paper boxes. Other packaging forms can also be used as per



users' requirement or order agreements, but they must comply with the regulations in GB3796.

- ⑤ **Transport precautions:** Dampness, sunburn and rain are strictly prohibited during transportation; It shall not be stored and transported together with food, seeds and feeding stuffs. It also shall not be stored and transported together with oxidants and other flammable and explosive products.

#### **15 Regulatory Information**

Domestic Pesticide Safety Management Laws and Regulations: Classification and Labels of Dangerous Chemical Substances Commonly Used (GB13690-92)

General Rules for Preparation of Chemical Safety Data Sheet (GB16483-2000)

The Principle of Classification of Transport Packaging Groups of Dangerous Goods (GB/T15098-94) [A]

International laws and regulations: It mainly provides international regulatory information on chemical management and operation [C]

#### **16 Other Information**

References: [C]

Filling time: Oct. 21, 2017. [A]

Filled by: Safety & Technology Department of Liaoning Dongfeng Daily Necessities Co., Ltd. [A]

Data reviewed by: Quality Inspection Division of Liaoning Dongfeng Daily Necessities Co., Ltd. [A]

Modification description: No amendment [A]

Other information: To our best knowledge, the content contained here is more accurate. However, we shall not assume any liabilities caused by the accuracy or completeness of the data and information mentioned above, and the above data and information shall not be constituted as the basis for establishing a legal and effective contractual relationship. [C]