

河北捷润科技有限公司

Hebei JRain Technology Co., Ltd.

Date: Apr.4th, 2025

Material Safety Data Sheet (MSDS)

Part I Chemical Product and Company Identification

Product name: DIAFENTHIURON 97% TC

Company: HEBEI JRAIN TECHNOLOGY CO.,LTD.

Address: No. 66 XIANGTAI ROAD, YUHUA DISTRICT, SHIJIAZHUANG CITY, HEBEI PROVINCE, CHINA

Postcode: 050000

Fax: 0311-80680380

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80680379 MSDS No.: CL-080

Part II Composition/Information on Ingredients

Pure Compound

Chemical name: 1-tert-butyl-3-(2, 6-di-isopropyl-4-phenoxyphenyl)thiourea

Hazardous components	Concentration	CAS No.
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<u>Diafenthiuron</u>		<u>80060-09-9</u>
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Part III Hazards Identification

Hazard class: Class 9, toxic substances.

Routes of entry: Inhalation, ingestion and skin absorption.

Health hazard: It's pungent to eyes and skin, and generally does not cause systemic toxicity.

Environmental hazard: Not available

Danger of burning and exploding: It's combustible in the presence of open flames and high heat. It decomposes in the presence of high heat and gives off highly toxic smoke and gas.

Part IV First Aid Measures

Skin contact: Take off all contaminated clothing immediately. Wash off thoroughly with soap and water. If poisoned, send to hospital in time and treat symptomatically.

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Eye contact: Open the eyelids and wash eyes for 15 minutes with running water.
Seek medical attention.

Inhalation: Remove to fresh air. Seek medical attention.

Ingestion: If accidentally swallowed, drink an appropriate amount of warm water to induce vomiting. If poisoned, send to hospital in time and treat symptomatically.

Part V Fire-Fighting Measures

Hazard property: It's combustible in the presence of open flames and high heat. It decomposes in the presence of high heat and gives off highly toxic smoke and gas.

Poisonous combustion products: Not available

Fire-Extinguishing method and fire extinguisher: Foam, dry powder and sandy soil
Advice on fire-fighting: Not available

Part VI Accidental Release Measures

Emergency treatment: Segregate the contaminated area and place warning marks around this area. It is suggested that personnel in emergency treatment services should wear self-contained breathing apparatus and chemical protective suits; avoid direct contact with the leakage. Absorb the leakage with the mixture of sandy soil or other noncombustible sorbents, and then transfer to a safe place; or wash with large amount of water, and discharge the diluted sewage into waste water treatment system. If significant leakage occurs, recycle the leakage or abandon it after innocuous treatment.

Part VII Handling and Storage

Advice on handling: It is a poisonous pesticide, and can not be mixed with food or feedstuff. No smoking, drinking or eating in workplaces. Handle with care when loading and unloading during transportation to protect the package and containers from damages. Pay attention to personal protection during split charging and transportation. Avoid the pollution of water sources and fish ponds when applying it.

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Advice on storage: It should be stored in cool and ventilated warehouses. Avoid moisture, sunlight and rain. There should be specific people in charge of its safekeeping. Keep the containers sealed up, and away from moisture, rain and sunlight. It should be stored separately with oxidants, acids and edible chemical raw materials. Do not mix with food, seeds, feedstuff or various daily necessities. No smoking, drinking or eating in workplaces. Handle with care when loading and unloading during transportation to protect the package and containers from damages. Pay attention to personal protection during split charging and transportation.

Part VIII Exposure Controls / Personal Protection

Maximum allowable concentration: Not available

Monitoring method: Not available

Engineering control: Hermetical operation and local exhaust ventilation.

Respiratory system protection: When production, operation or applying it for agricultural purposes, it is suggested to wear anti-poison respirators. During emergency rescue or escape, it is suggested to wear self-contained breathing apparatus.

Eye protection: Wear protective safety spectacles.

Body protection: Wear relevant protective clothes.

Hand protection: Wear chemical safety gloves.

Other protection: No smoking, eating or drinking in workplaces. After operation, take a bathe and change clothes. Pay attention to personal hygiene.

Part IX Physical and Chemical Properties

Appearance and characteristics: Grey to dark grey powder.

PH value: 5.5~9.0

Melting point (°C): 144.6~147.7°C

Relative density (water=1): 1.09 (20°C)

Boiling point (°C): Not available

Relative vapor density (air=1): Not available

Saturated vapor pressure (kPa): <2×10⁻⁶Pa (25°C)

Combustion heat (kJ/mol): Not available

Critical temperature (°C): Not available

Critical pressure (MPa): Not available

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Value of octanol /water partition coefficient: Not available
Flash point (°C): Not available
Ignition temperature (°C): Not available
Upper explosive limit% (V/V): Not available
Lower explosive limit% (V/V): Not available
Solubility: Water 0.06mg/L (25°C), acetone 320, ethanol 43, toluene 330, n-octyl alcohol 26 (g/L, 25°C).

Main application: As an agricultural thiourea insecticide and acaricide, it is used to prevent and kill aphid, cicadellid, aleyrodinae and other insects in cotton, fruits, vegetable and teabush. It can also control diamond-back moth, pieris rapae and noctuid.

Part X Stability and Reactivity

Stability: It is stable to light, in either air or water.
Forbidden combination material: Not available
Conditions to avoid contact: Store separately and keep away from fire sources.
Polymerized Danger: Not available
Decomposition products: Not available

Part XI Toxicological Information

Acute toxicity: The acute oral LD₅₀ is 50~92.6mg/kg and the dermal LD₅₀ is more than 2000mg/kg in male rats. The oral LD₅₀ is 68.1 mg/kg in mice.
Subacute and chronic toxicity: It has low accumulation. The non-effect level for subchronic toxicity in rats is 5 mg/kg.
Irritability: It has no irritation to skin or eyes of rabbits.
Allergenicity: Weak allergenicity.
Mutagenicity: Non-mutagenicity.
Teratogenicity: Not available
Carcinogenicity: Not available

Part XII Ecological Information

Ecotoxicity: The LC₅₀ (96h, mg/L) is 0.0038 in carp, 0.0007 in rainbow trout and 0.0013 in blue-gill sunfish. Bee toxicity: LD₅₀ is 2.1μ /bee (oral, 48 hours) and 1.5μg/bee (contact). It doesn't cause great harm in fields. Both the acute oral LD₅₀ (mg/kg) and the LC₅₀ (dietary toxicity in 8

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days) are more than 1500mg/kg in bobwhite quail and mallard.

Biodegradability: It decomposes in soil rapidly and its half-life is lower than 1 hour to 1.4 days.

Abiotic degradation: Not available

Bioconcentration or bioaccumulation: Not available

Part XIII Disposal Considerations

Properties of waste: Hazardous waste.

Disposal information: Incineration treatment.

Advice on disposition: Not available

Part IX Transport Information

Dangerous goods No.: 6.1 2588

Part XV Regulatory Information

Regulatory information: Regulations on the Control over Safety of Dangerous Chemicals (the State Council's No. 344 Decree), Classification and Labels of Dangerous Chemical Substances Commonly Used GB13690-1992, Administrative Regulations of the People's Republic of China on Pesticides, Measures for the Implementation of Administrative Regulations of the People's Republic of China on Pesticides.

Part XVI Other Information

Reference documents: Fine Chemicals Product Manual – Pesticide,

Electronic Pesticide Dictionary, A Complete Collection of Pesticide

Form filling department: Hebei Bestar Commerce and trade Co.,ltd
(Production Department)

Data editing unit: Hebei Bestar Commerce and trade Co.,ltd

(Technology Department) Modification

description: First draft

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Other information: None

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