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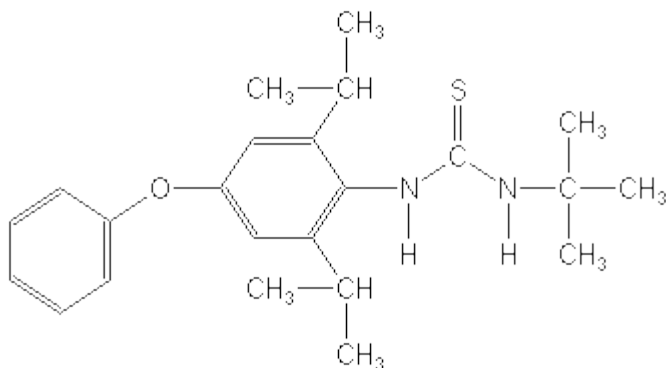
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## Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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ProductName	: <b>DiafenthiuronTechnical</b>
IUPAC Name	: 1-tert-butyl-3-(2,6-di-isopropyl-4-phenoxyphenyl)thiourea
Mole formula	: C <sub>23</sub> H <sub>32</sub> N <sub>2</sub> OS
Mole weight	: 384.6
Uses	: Insecticide, acaricide
Manufacturer / Supplier	: <b>Bharat Rasayan Limited</b> 1501, Vikram Tower, Rajendra Place, New Delhi – 110008, INDIA
Emergency Phones	: +91-11-43661120,1104 Fax 43661100

### Structure



## Section 2: Product Composition

Composition	: 96.0% m/m min.
CAS No.	: 80060-09-9
MF	: C23H32N2OS
Mole weight	; 384.60

## Section 3 : Hazard Identification

May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

May be harmful, if swallowed.

**Eye:** May cause eye irritation

**Skin:** May cause skin irritation

**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.

**Inhalation:** May cause respirator tract irritation.

## Section 4: First – Aid Measures

Eye contact : Flush eyes with copious amount of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin Contact : Remove contaminated clothing. Wash affected area with soap and water. Get medical aid. Wash clothing before reuse.

Ingestion : Never give anything by mouth to an unconscious person. Get medical aid. Do not induce vomiting. If conscious and alert. Rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation : In case of inhalation, carry the victim to fresh air. Keep open all doors and windows. Provide artificial respiration, if needed. Get medical aid.

Note to Physician : Treat the victim symptomatically and supportively.

### **Section 5: Fire & Explosion Data**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Favours may be heavier than air. They can spread along the ground and collect in low or confined areas. Runoff from fire control or dilution water may cause pollution.

**Extinguishing Media** : In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use agent most appropriate to extinguish fire.

**Auto-ignition Temperature:** Not available

**Explosion Limit, Lower:** Not available

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**Upper:** Not available

**NFPA Rating:** (estimated) Health: 1; Flammability: 1; Instability: 0

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### **Section 6: Accidental Release**

**General Information:** Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place on suitable container. Avoid runoff into storm sewers and ditches, which lead to waterways. Cleanup spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

### **Section 7: Handling & Storage**

Handling : Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes,

Storage : skin, and clothing. Keep container tightly : Store in a tightly closed container. Store in a cool dry, well-ventilated area away from incompatible substances.

### Section 8: Personal Protection / Safety

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

#### *Personal Protective Equipment*

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN149 must be followed whenever workplace conditions warrant a respirator's use.

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### Section 9: Physico-Chemical Data

State	: Solid powder
Colour	: white to offwhite
Melting point	: 144.6-147.7°C
Specific Gravity	: 1.09
<i>Odor</i>	: <i>odourless</i>
Vapor pressure	: <2 × 10 <sup>-3</sup> mPa (25°C).

Solubility at 25°C in: acetone 320 g/l, ethanol 43 g/l, n -hexane 9.6 g/l, n -octanol 26 g/l, toluene 330 g/l.

### **Section 10: Stability & reactivity**

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, excess heat, and strong oxidants.

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Incompatibilities with other : Oxidizing agents.

Materials

Hazardous Decomposition : Carbon monoxide, irritating and toxic fumes and  
Products gases, carbon dioxide

Hazardous Polymerization : Has not been reported.

### **Section 11: Toxicological Information**

Rats Oral LD<sub>50</sub> : 2068 mg/kg

Inhalation LC 50 for rat : 0.558 mg/ l air

Skin and eye acute : 2000 mg/kg

LD<sub>50</sub>

Carcinogenicity : Not listed by ACGIH, NIOSH, NTP, or OSHA

Epidemiology : No information available

Teratogenicity : No information available

Mutagenicity : No information available

Reproduction : No information available

Neurotoxicity : No information available

## **Section 12: Ecological Information**

Toxicity on aquatic organisms

LC50 (96h) : carp 0.0038mg/l

Rainbow trout : 0.0007mg/l

Bluegill :0.0013mg/l

Toxicity on birds

Acute oral LD50 (mg/kg) : mallard and bobwhite quail >1500

LC50 (8days) ; mallard and bobwhite quail >1500mg/kg

Toxicity on other organisms

Bee LD50 (48h) : 2.1µg/bee(oral) , 1.5µg/bee(contact)

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## **Section 13: Disposal Considerations**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None Listed.

RCRA U-Series: None Listed.

## **Section 14: Transportation Information**

Proper Shipping Name: Environmentally Hazardous Substance, solid. DOT (US) Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

### **Section 15: Regulatory Information Product related hazard information:**

- Hazard symbols : Xn,N
- R phrases: :20-25-26-50/53
  
- S Phrases: S2- Keep out of reach of children.  
S13-Keep away from food, drink and animal feeding stuffs.  
S20/21-When using do not eat,drink or smoke.  
S44-In case of accident seeks medical advice.

### **Section 16. OTHER INFORMATION**

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The information provided in this MSDS is of general nature not specific for a particular purpose or situation, and believed to be correct and faithful. **Bharat Rasayan Limited** does not make any warranty or guarantee of any kind regarding fitness or completeness of information. Bharat Rasayan Limited disclaims any liability to the result(s) obtained or arising out of any use of the product or reliance or data/information contained in this MSDS.

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**Prepared by: Bharat Rasayan Limited: EHS Department**

**Issue Date: 11/05/2014.**