



## Identification of the substance or mixture and of the company/undertaking

### **Product identifier.**

Propiconazole (BSI, draft E-ISO, (m) draft F-ISO)

### **Relevant identified uses of the substance or mixture and uses advised against**

Fungicide

### **Details of the supplier of the safety data sheet.**

SPARCHEM

159, Ashoka Shopping Centre, 2nd Flr.,

L.T. Marg, Mumbai - 400001,

Telephone number: 0091- 22-22642642

E-mail: response@sparchem.com

### **Emergency telephone number**

0091- 22-22642642

## Hazards identification

### **Classification of the substance or mixture**

Classification as per Directives 67/548/EEC:

Xn; R22

R43

N; R50-53

### **Classification as per Regulation (EC) No 1272/2008:**

Acute Tox. 4 \*, H302

Skin Sens. 1, H317

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

### **Label elements - Pictogram, Signal Word Code(s)**

GHS07

GHS09

### **Hazard statement Code(s)**

H302: Harmful if swallowed.  
H317: May cause an allergic skin reaction.  
H410: Very toxic to aquatic life with long lasting effects.

### **Precautionary Statements**

P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P330: Rinse mouth.  
P261: Avoid breathing dust/fume/gas/mist/ vapours/spray.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.  
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.  
P321: Specific treatment-treat symptomatically.  
P363: Wash contaminated clothing before reuse.  
P501: Dispose of contents/container in accordance with local/regional/national/regulation.  
P273: Avoid release to the environment.  
P391: Collect spillage.

### **Other hazards**

Very toxic to aquatic life with long lasting effects. Does not meet the criteria for vPvB in accordance with Annex XIII of REACH.

## Composition/information on ingredients

### **Substances.**

<b>Chemical name</b>	<b>CAS No/ EC No</b>	<b>Index No.</b>	<b>Classification (Directives 67/548/EEC)</b>	<b>Classification (Regulation (EC) No 1272/2008)</b>	<b>Con. % w/w</b>
Propiconazole(ISO) (+)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]- 1H-1,2,4-triazole	60207- 90-1/ 262- 104-4	613- 205- 00-0	Xn; R22 R43 N; R50-53	Acute Tox. 4 *, H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	95.0 (min)

## First aid measures

### **Description of first aid measures**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

IF INHALED: Avoid breathing dust/fume/gas/mist/ vapours/spray. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

IF EYE CONTACT, immediately flush with plenty of water at least for 15 minutes.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

### **Most important symptoms and effects, both acute and delayed**

Prolonged or repeated exposure may irritate the respiratory tract and eyes and may cause headaches and dizziness. Some individuals may develop an allergic response.

### **Indication of any immediate medical attention and special treatment needed**

Treat symptomatically. No specific antidote available.

## Firefighting measures

### **Extinguishing media**

If product is involved in a fire, use water spray, foam, dry powder, carbon dioxide or sand. Keep nearby containers and equipment cool with a water stream.

### **Special hazards arising from the substance or mixture**

May give off toxic fumes if heated to decomposition. Do not breathe fumes. Wear self contained breathing apparatus.

### **Advice for firefighters**

Whenever this product involved in a major fire, firefighters to wear boots, overalls, gloves, eye and face protection and breathing apparatus. Keep containers cool with water spray. Water should be used only to cool the unaffected stock.

## Accidental release measures

### **Personal precautions, protective equipment and emergency procedures.**

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Remove ignition sources and need to evacuate the danger area or to consult an expert. When dealing with a spillage do not eat, drink or smoke.

### **Environmental precautions**

Do not discharge into the drains/surface water/groundwater.

### **Methods and material for containment and cleaning up**

Transfer any product remaining in damaged or leaking containers into a clean, empty drum, and label the drum.

Absorb spillage and cover contaminated areas with lime, sawdust, sand, diatomaceous earth or other absorbent material and place in a secure container for safe disposal. Contain a large spillage by a barrier of earth or sandbags. Prevent liquid from spreading to other cargo, vegetation, or waterways. Clean contaminated floors and objects thoroughly with plenty of water, observing environmental regulations.

### **Reference to other sections**

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

## **Handling and storage**

### **Precautions for safe handling**

Wear full protective clothing by those handling concentrates. Adequate washing facilities should be available at all times and should be close to site of handling. Eating, drinking and smoking should be prohibited during handling. Wash hands after use and to remove contaminated clothing and protective equipment before entering eating areas.

### **Conditions for safe storage, including any incompatibilities**

It should be stored in clearly labelled rigid and leak proof containers and away from containers of food and drink. Storage should be under lock and key and secure from access by children and other unauthorized persons. Store in a well-ventilated place.

### **Specific end use(s)**

When opening a container and mixing, protective impermeable boots, clean overalls impermeable gloves, eye protection and a respirator should be worn. Avoid contact to mouth and eyes. Before eating, drinking or smoking, hands and other exposed skin should be thoroughly washed with alkaline soap.

## **Exposure controls/personal protection**

### **Control parameters**

#### **Occupational exposure limit**

8 mg/m<sup>2</sup> TWA

#### **DNEL and PNEC values**

Not available

#### **Exposure controls**

### **Appropriate engineering controls**

**Mechanical ventilation should be used when handling this product in closed spaces.**

Individual protection measures, such as personal protective equipment

**General precautions**

Change working clothes daily.

**Eye/face protection**

Wear safety goggles with imperforated side shield and face shield.

**Skin protection**

Avoid contact with skin. Wear apron, boots and full protective suit.

**Respiratory protection**

Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure.

**Thermal hazards**

Whenever this product involved in a major fire, firefighters to wear boots, overalls, gloves, eye and face protection and breathing apparatus.

**Environmental exposure controls**

Keep away from food, drink and animal feed stuff. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheet.

## Physical and chemical properties

**Information on basic physical and chemical properties****Appearance**

Yellowish brown viscous liquid

**Odour**

Odourless

**Odour threshold**

Not available

**PH**

4.9 (1 %; Solution in deionised water; 25 °C)

**Melting point/freezing point**

Not applicable

**Initial boiling point and boiling range**

Not applicable

**Flash point**

185 °C (Pensky-Martens closed cup)

**Evaporation rate**

Not applicable

**Flammability (solid, gas)**

Non-flammable

**Upper/lower flammability or explosive limits**

Non-explosive

**Vapour pressure**

0.56 Pa

**Relative density**

1.30 g/ml

**Solubility(ies)**

In water 100 mg/l (20 °C). In n-hexane 47 g/l. Completely miscible with ethanol, acetone, toluene and n-octanol (25 °C).

**Partition coefficient: n-octanol/water**

P = log Pow: 3.19

**Auto-ignition temperature**

Not available

**Decomposition temperature**

Not available

**Viscosity**

Not available

**Explosive properties**

Non-explosive

**Oxidising properties**

Non-oxidizer

**Other information**

Henry:  $9.2 \times 10^{-5}$  Pa m<sup>3</sup> mol<sup>-1</sup> (20 °C, calc.)

## Stability and reactivity

**Reactivity**

Stable up to 320 °C; no significant hydrolysis.

**Chemical stability**

Stable for two years at ambient conditions.

**Possibility of hazardous reactions**

Not available.

**Conditions to avoid**

Avoid excessive heat and flame.

**Incompatible materials**

Avoid contact with oxidizing alkaline and acidic conditions and materials.

**Hazardous decomposition products**

Thermal decomposition may produce toxic carbon and nitrogen oxides, and hydrogen chloride.

## Toxicological information

**Information on toxicological effects****Acute toxicity, oral, dermal, inhalation**

Oral LD50: 1458.28 mg/kg bw (Rats)

Dermal LD50: >2000 mg/kg bw (Rats)

Inhalation LC50 :> 5.16 mg/l (Rats)

**Skin Corrosion/Irritation**

Non-irritant to skin of rabbits

**serious eye damage/irritation**

Mild-irritant to mucous membrane of rabbits

**respiratory or skin sensitisation**

Non-sensitiser to skin of Guinea pigs

**germ cell mutagenicity**

Non-mutagenic

**Carcinogenicity**

Non-carcinogenic

**Reproductive toxicity**

Non-reprotoxic and teratogenic

**STOT-single exposure**

Not applicable

**STOT-repeated exposure**

Not applicable

**Aspiration hazard**

Chemical pneumonitis resulting from aspiration of the solvent into the lungs is a hazard that occurs when liquid formulations are used.

## Ecological information

**Toxicity****Guppy, *Poecilia reticulata*, 96 hours**

EC50: 4.68 mg/l

**Daphnia magna, 48 hours**

EC50: 2.89 mg/l

**Chlorella vulgaris, 72 hours**

EC50: 8.87mg/ml

**Bees, *Apis indica***

LD50: 0.044% w/w

**Acute toxicity Earthworm, *Lampito mauritii***

LD50: 285.07 mg/kg dry wt of soil

**Birds, Mallard ducks**

LD50: >2510 mg/kg

**Persistence and degradability**

DT50 in aerobic soils (25 °C) 40-70 d. The main degradation pathways are hydroxylation of the propyl side-chain and the dioxolane ring, and finally formation of 1,2,4-triazole.

**Bioaccumulative potential**

Propiconazole has low to medium potential to bioaccumulate.

**Mobility in soil**

Koc (ads) 950 ml/g, immobile in soil.

**Results of PBT and vPvB assessment**

Very toxic to aquatic life with long lasting effects. Does not meet the criteria for vPvB in accordance with Annex XIII of REACH.

**Other adverse effects**

With recommended application rates it is unlikely that Lambda-cyhalothrin or its degradation products will attain levels of environmental significance. Notwithstanding its high toxicity for fish and honey bees, this is only likely to cause a problem in the case of spillage and over spraying.

## Disposal considerations

### Waste treatment methods

#### **Product Disposal**

Avoid exposure, if possible by the use of appropriate protective clothing and masks. Absorb spillage with lime, damp sawdust, sand, or earth and dispose of safely (see below). If spillage is large, contain it by building a barrier of earth or sandbags.

Waste containing Lambda-cyhalothrin should be burnt in a proper high temperature incinerator with effluent scrubbing. Where no incinerator is available, contaminated absorbents or surplus products should be decomposed by hydrolysis at pH 12 or above. Contact with a suitable hydrolysing agent is required to ensure degradation of the active ingredient to a safe level. Dispose of product in accordance with local regulation.

Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into streams, water-courses, open waterways, ditches, fields with drainage systems, or the catchment areas of boreholes, wells, springs, or ponds.

#### **Package disposal**

Decontaminate empty, damaged, or leaking containers with a 10% sodium carbonate solution added at the rate of at least 1 litre per 20-litre drum. Puncture containers to prevent reuse. Dispose of empty containers in an incinerator approved for chemicals. Dispose of container in accordance with local regulation.

## Transport information

#### **UN number**

2902

#### **UN proper shipping name**

PESTICIDE LIQUID, TOXIC, N.O.S

#### **Transport hazard class(es)**

ADR: 6.1

IMDG: 6.1

ICAO/IATA: 6.1

RID: 6.1

#### **Packing group**

III

#### **Environmental hazards**

Propiconazole designated as marine pollutant.

#### **Special precautions for user**

Ensure that containers are sound and that labels are securely fixed and undamaged before dispatch. Do not load together with food and animal feed.

#### **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not relevant



## Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Propiconazole has been classified under Dangerous substances Directive 67/548/EEC & Regulation No 1272/2008.

### Chemical safety assessment

Evaluated by WHO and European Food Safety Authority.

## Other information

### Indication of changes

Changes have been made in all section.

### Abbreviations and acronyms

LD50: Lethal Dose, 50%

LC50: Lethal Concentration, 50%

STOT: Specific Target Organ Toxicity

DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration

ADR: International Carriage of Dangerous Goods by Road

IMDG: International Maritime Dangerous Goods

ICAO/IATA: International Civil Aviation Organization /International Airlines Travel Agent

RID: International Carriage of Dangerous Goods by Rail

### Key literature references and sources for data

-Our study reports

-World Health Organization for the International Programme on Chemical Safety.

-BCPC, Pesticide Manual

### Text of R-phrases mentioned in Section 3:

R22: Harmful if swallowed.

R43: May cause sensitisation by skin contact

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Text of the hazard statements mentioned in Section 3:

H302: Harmful if swallowed

H317: May cause an allergic skin reaction

H411: Toxic to aquatic life with long lasting effects

**Training**

Training of workers in techniques to avoid contact with substance is essential.

**Liability**

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