



Hangzhou Tianlong Biotechnology Co., Ltd.

Add: Room 1906, Fengqi Times Tower, No.338, Fengqi East Road, Hangzhou, Zhejiang, China.

MATERIAL SAFETY DATA SHEET

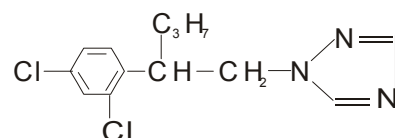
1. Chemical Product Identification

Product Name: Penconazole

Molecular Formula: C₁₃H₁₅Cl₂N₃

Molecular Weight: 284.18

Structural Formula:



Chemical Name:

1-(2,4-dichloro-β-propylphenethyl)-1H-1,2,4-triazole

CAS No.:66246-88-6

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

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2. Composition / Information on Ingredients

Composition	CAS No.	Content %
penconazole	66246-88-6	95.0
Others ingredients		5.0

3. Hazards Summarizing

More important danger for the man:

Dangers for the environment: toxic to aquatic

Physical-chemical dangers: can decompose at high temperatures forming toxic gases.

4. First Aid Measures

Skin: remove contaminated clothing and wash affected areas thoroughly with

soap and water.

Eyes: flush with large quantities of clean tap water for at least 15 minutes.

Inhalation: move affected person to fresh air and keep at rest until recovered.

Swallowed: If swallowed, Do not induce vomiting. Give a glass of water and contact a doctor or Poisons Information Center.

5. Fire-Fighting Measures

This product is non-flammable and non-explosive. Extinguish warehouse and factory fires using fine-water spray or foam. During a fire this product may release smoke and hazardous decomposition products. When fighting a major fire wear an air-supplied respirator.

6. Accidental Release Measures

Personal cautions: Safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

If clothing becomes contaminated with product, remove the clothing immediately if product gets on skin, wash the area with soap and water immediately. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

7. Handling and Storage

Handling: do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: Store in the sealed, original containers in a dry, secure, well-ventilated place away from fertilizers, seed, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorized persons and animals.

8. Exposure Controls/personal protection

Exposure control: Swallowing is unlikely under normal condition of usage. Inhalation of spray mist is a possible route of exposure. The aromatic hydrocarbon solvent may be absorbed through skin that comes into direct contact with this product. This diluted with water prior to use as a spray. This diluted form is less toxic by all exposure routes.

Do not enter treated areas without protective clothing until has dried.

Personal protection: Avoid contacting with eyes and skin. Do not inhale spray mist. When preparing the spray wear:

Cotton overalls buttoned to the neck and wrist,

A washable hat,

Elbow-length PVC gloves,

A face-shield or goggles.

9. Physical and Chemical Properties

Form: solid

Color: gray

Melting point: 60°C

Boiling point : >300°C , 99.2°C/1.9Pa
Density: 1.3G/CM³ AT 20°C
Vapor pressure : 0.21mPa@20°C , 0.37mPa@25°C
Partition coefficient : KowlogP=3.72(pH=5.7, 20°C)
Water solubility: 70mg/L (25°C)
PH value:7-10
Flash point: 68-70°C
Ignition temperature: Not applicable

10. Stability and Reactivity

Stability: On hydrolysis stability, 350 degrees below C stability.
Conditions to avoid: fire and heat
Products to avoid: strong acid and alkaline pesticides
Thermal decomposition: no detect
Hazardous decomposition: No detect

11. Toxicological Information

Acute toxicity:
Acute oral LD50: 2125mg/kg (rat)
Acute dermal LD50: >3000mg/kg (rabbit)
Acute inhalation LC50 (4hour) :>4000mg/L 9 (rat)
Irritation:
Contact with the skin: non-irritant (based on the studies with rabbits)
Contact with the eyes: non-irritant (based on studies with rabbits)
Respiratory System: slight irritant (based on human experience).
Effects for chronic toxicity: studies show that there is no finding neurotoxicity, reproductive effects, but increase incidence of liver tumors at extremely high doses (male mice)
Chronic(active ingredient):
Penconazole technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, carcinogenic, teratogenic or reproductive effects was obtained.
The aromatic petroleum hydrocarbon liquid may cause central nervous system depression and narcosis.
Sensitisation: penconazole technical did not induce a sensitisation reaction in guinea pigs. The sensitizing potential of the hydrocarbon liquid is not known.

12. Ecological Information

Acute oral LD50(8d) : Japen quail 2424mg/kg
Bei jing duck >3000mg/kg
Mallard >1590mg/kg

LC50(96h,mg/L) : Carp 3.8-4.6
Rainbow trout 1.7-4.3
Bluegill 2.1-2.8
Daphnia LC50(48h) 7-11mg/l
Non toxic to bee : LD50(48h) 5µg/bee (oral and contact)
Earthworm LC50(14d) : >1000mg/kg soil

13. Disposal Considerations

Dispose of empty, used containers by:

Triple rinsing or preferably pressure rinsing containers with water. Add the rinsings to the spray tank. Do not dispose of undiluted chemicals on site.

If recycling, replace cap and return clean container to recycler or designated collection point.

If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty container and product should not be burnt.

14. Transport Information

In case of spillage, it is important to take all steps necessary to:

Avoid eye contact and skin contact

Avoid contamination of waterways.

Class: 9

UN No.: 3077

Packing group III

15. Regulatory Information

Safety Phrases: Keep out of reach of children

Keep away from food, drink and animal feeding stuff

Do not breathe spray

When using do not eat, drink or smoke

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

In case of accident or if you feel unwell, seek medical advice immediately (Show the label where possible)

Use appropriate containment to avoid environmental contamination

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this

MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS