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MATERIAL SAFETY DATA SHEET OF

PACLOBUTRAZOL 95% TC

1. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Supplier: Shanghai Bosman Industrial Co., Ltd.

Street address: No.1611, North Sichuan Road, Hongkou District, Shanghai, P.R. China.

FAX: +86 21 63065878

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Product name: Paclobutrazol 95% TC

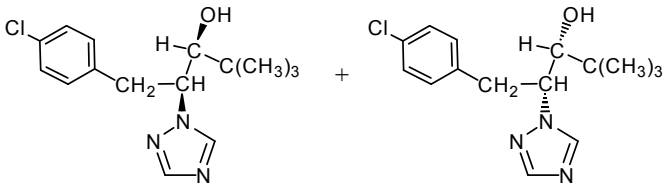
2. COMPOSITION/INFORMATION ON INGREDIENTS

Formulation Type: Technical material (TC)

Chemical Abstracts name:

R*,R*)-(?-b-[(4-chlorophenyl)methyl]-a-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol

Structural Formula:



(2*S*,3*S*)- (2*R*,3*R*)-

Other ingredients determined not to be hazardous

INGREDIENT	CAS NO	PROPORTION
Paclobutrazol	76738-62-0	95% min.
other ingredients	Not available	Up to 100%

3. HAZARDS INDENTIFICATION

Emergency overview: Caution! Keep out of reach of children. Harmful by inhalation, in contact with skin and if swallowed. Do not breathe dust. Avoid contact with skin and eyes.

Environmental hazards: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

General: Have the product container, label or Material Safety Data Sheet with you when going for

treatment. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

Inhalation: If inhaled, remove to fresh air and keep at rest. Loosen clothes. Obtain medical advice if at all worried. Restore and/or support breathing as required. In extreme cases of exposure; if breathing stops or shows signs of failing, start artificial respiration.

Skin contact: Carefully remove contaminated clothing and footwear. Wash affected areas with soap and water. Apply vitamin E cream, toilet milks or local anaesthetic creams to reduce irritation if it occurs. Seek medical advice if at all worried. Launder contaminated clothing before reuse.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes, holding eye open. Seek advice from an ophthalmologist.

Ingestion: Wash out mouth with water. Do not induce vomiting. Keep patient at rest and seek medical advice as above. Do not apply mouth to mouth resuscitation if the material has been ingested.

Note to physician: There is no specific antidote available. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing media:

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam Or Water spray

Hazards from combustion products: In the event of fire, hydrogen cyanide, hydrogen chloride, and oxides of nitrogen and carbon may be produced.

Precautions for fire fighters: Fire fighters should wear full protective gear, including self-contained breathing apparatus, as toxic and irritating decomposition products may be produced in afire. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area to prevent contamination of water sources. Dispose of fire control extinguishing agent and spillage later in a safe manner. Do not release contaminated water into the environment.

6. ACCIDENT RELEASE MEASURES

Personal precautions : Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local /

national regulations.

7. HANDLING AND STORAGE

Handling: Keep out of reach of children. Avoid contact with eyes and skin. No special protective measures against fire required. When using do not eat, drink or smoke.

Storage: Store in original container in a cool, dry, well-ventilated area. Keep away from food, drink and animal feeds. Keep out of direct sunlight and avoid frosts.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: No special ventilation is required, as this product is not volatile. Control process conditions to avoid contact. Use local exhaust ventilation while spraying, if possible.

Personal protective equipment:

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Respiratory protection: No personal respiratory protective equipment normally required. A particulate filter respirator may be necessary until effective technical measures are installed.

Hand protection: Chemical resistant gloves are not usually required. Select gloves based on the physical job requirements.

Eye protection: If eye contact is possible, use tight-fitting chemical safety goggles.

Skin and body protection: No special protective equipment required. Select skin and body protection based on the physical job requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white powder

Odor: NA

pH: 4.0-9.0

Vapor pressure: NA

Melting point: NA

Flash point: Not available

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions.

Incompatible materials: Avoid oxidizing agent, strong acids and alkalies.

Hazardous decomposition products: In the event of fire, hydrogen cyanide, hydrogen chloride, and

oxides of nitrogen and carbon may be produced.

11. TOXICOLOGICAL IMFORMATION

Acut toxicity:

Acute Oral Toxicity: LD_{50}: for rats >2000 mg/kg.

Acute Dermal Toxicity: LD_{50}: > 2000mg/kg (rat).

Acute Inhalation Toxicity: LC_{50} (4 h) for male rats 4.79, female rats 3.13 mg/l air

Eye Irritation: Not irritant (rabbit).

Skin Irritation: not irritant (rabbit).

Sensitisation: not sensitizing (guinea pig)

Chronic toxicity:

NOEL (1 y) for dogs 75 mg/kg daily; (2 y) for rats 10.2 mg/kg diet.

Other

Not mutagenic.

12. ECOLOGICAL IMFORMATION

Birds Acute oral LD_{50} for mallard ducks >7913, Japanese quail > 2100 mg/kg b.w. Dietary LC_{50} (5 d) for mallard ducks and bobwhite quail 20 000 mg/kg diet.

Fish LC_{50} (96 h) for rainbow trout 27.8, bluegill sunfish 23.6 mg/ml.

Daphnia EC_{50} (48 h) >29.0 mg/l.

Algae EC_{50} (96 h) for Anabaena flos-aquae 39.7 mg/l.

Other aquatic spp. LC_{50} (96 h) for mysid shrimps 9.0 mg/l; EC_{50} (48 h) for Pacific oyster larvae >10 mg/l; EC_{50} (7 d) for duckweed (Lemna gibba) 8.2 µg/l.

Bees LD_{50} for honeybees (oral) >2 µg/bee; (contact) >40 µg/bee.

Worms LC_{50} (14 d) for earthworms >1000 mg/kg.

13. DISPOSAL CONSIDERATION

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

UN Number: 3077

Description: Environmentally hazardous substance, solid, n.o.s.. (Paclobutrazol)

Class: 9

Packing group: III.

Marine pollutant: Yes.

15. REGULATARY INFORMATION

Follow all local and international laws and regulations.

16. OTHER INFORMATION

Version: 1.0

Issue date: Oct. 10, 2024

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact the company.

-- END OF MSDS --