

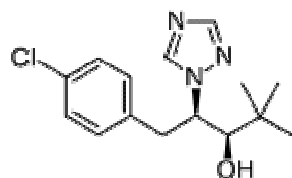
PACLOBUTRAZOL TECHNICAL(CANSTAR)**CANARY****MATERIAL SAFETY DATA SHEET****1. PRODUCT IDENTIFICATION****Product Name:** Paclobutrazol Technical Material**CAS No.:** 76738-62-0**Chemical Name:**

(R*, R*)-beta-[(4-chlorophenyl)methyl]-alpha(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol.

Chemical Class: A triazole plant growth regulator.**Empirical formula:** C₁₅H₂₀ClN₃O.**MANUFACTURER ADDRESS :** CANARY AGROCHEMICALS PVT LIMITED ,
7-Shopping Centre, Karampura, New Delhi (INDIA)

PHONE : (011) 65168611

FAX : (011) 45873091

EMAIL : canaryagro@yahoo.in**USE:** Horticulture Plant growth regulator for professional use.**Structure:**



PACLOBUTRAZOL TECHNICAL **MATERIAL SAFETY DATA SHEET**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition	CAS No.	Content.
Paclobutrazol	76738-62-0	>95.0%
Impurities & water		<5.0%

3. HAZARDS IDENTIFICATION

Acute toxicity

This product is unlikely to present a toxicity hazard during normal use.

Swallowed: Tests on rat: LD50 1300-2000 mg/kg

Dermal Tests on rat: absorption LD50 >2000 mg/kg;

Tests on rabbit: absorption: LD50 >1000 mg/kg

Inhaled: Tests on rat: 3.13-4.79 mg/l/ 4hrs

Irritation

Eye: Moderate Irritant (rabbit)

Skin: Mild Irritant (rabbit)

Sensitization

Skin: NOT a sensitizer

Poisoning symptoms:

Swallowed: Swallowing can result in nausea, vomiting and abdominal pain.

Eye: An eye irritant.

Skin: Contact with skin may result in irritation.

Inhaled: May cause respiratory irritation as a vapour, mist or aerosol entering mucous membranes and respiratory tract.

CHRONIC

Available evidence indicates that repeated or prolonged exposure to paclobutrazol may adversely affect the liver. Reproductive studies indicate that paclobutrazol produces embryo / foetotoxic effects at maternally toxic doses only.

4. FIRST AID MEASURES

Ingestion: If swallowed, induce vomiting immediately as directed by medical doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**CANARY****PACLOBUTRAZOL TECHNICAL****MATERIAL SAFETY DATA SHEET**

Skin Contact: Wash off in flowing water or shower.

Inhalation: If inhaled: Move person to fresh air. Call doctor for further treatment advice if effects occur.

Notes to Physician

There is no specific antidote if this product is ingested. Treat symptomatically.

5. FIRE FIGHTING MEASURES**Fire and Explosion**

Flash Point (Test Method) : Does not flash

Flammable Limits (% in Air) : Upper: % Not Applicable, Lower: % Not Applicable

Auto ignition Temperature : Not Available

Flammability : Not Applicable

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate non-essential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES**In Case of Spill or Leak**

Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8.

PACLOBUTRAZOL TECHNICAL



CANARY MATERIAL SAFETY DATA SHEET

If a solid, sweep up material and place in a compatible disposal container. If a liquid, cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent. Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

For commercial applications and on-farm applications consult the product label.

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact: Where contact is prolonged or frequently repeated, wear chemical-resistant (such as nitrile or butyl) gloves.

Inhalation: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

**CANARY****PACLOBUTRAZOL TECHNICAL****MATERIAL SAFETY DATA SHEET****9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: White solid
Odor	: Not significant
Melting point	: 165-166°C
Flash point	: Does Not Flash
pH 1% Solution	: 6.2
Vapor pressure	: 0.001mPa at 20°C
Specific gravity	: 1.22g/ml
Flammability	: Not Flammable.
Explosive Properties	: Not explosive.
Oxidising Properties	: Not Oxidising.
Solubility	
- water solubility @ 20°C	: 25.9mg/kg
- solvent solubility	: 79.8 g/l methanol
	: 65.3 g/l acetone
	: 38.9 g/l ethyl acetone
Partition coefficient	: 3.18 Log ₁₀ P _{ow}
Viscosity	: N/A
Vapour density	: N/A
Evaporation rate	: N/A

Other information

Chemically stable on contact with aluminium, iron and zinc. If heated, caramelises at temperatures over 100°C, decomposes above 192°C to produce toxic and irritant vapours.

10. STABILITY AND REACTIVITY

Stability: Stable under standard conditions.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

Materials to Avoid: Oxidizing agents.

Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases.

**CANARY****PACLOBUTRAZOL TECHNICAL****MATERIAL SAFETY DATA SHEET****11. TOXICOLOGICAL INFORMATION****Acute Toxicity/Irritation Studies****Ingestion:** Slightly Toxic**Oral (LD50 Rat):** > 2,000 mg/kg body weight**Oral (LD50 Mouse):** > 2,000 mg/kg body weight**Dermal:** Practically Non-Toxic**Dermal (LD50 Rat):** > 2,000 mg/kg body weight**Inhalation:** Vapors unlikely**Inhalation (LC50 Rat):** >250mg/M3 for 4 hours**Eye Contact:** Slightly Irritating (Rabbit)**Skin Contact:** Non-Irritating (Rabbit)**Skin Sensitization:** It is not a skin sensitizer in animal tests.**Neurotoxicity** : Negative.**Reproductive Effects** : Causes birth defects only at doses toxic to the mother**Chronic/ Subchronic Toxicity Studies:** In the process of being identified and acquired.**Carcinogenicity** : Negative**Toxicity of Other Components** :Active Ingredients: Paclobutrazol Technical: In the process of being identified and acquired. Inert Ingredients.**12. ECOLOGICAL INFORMATION****Ecotoxicity****Fish** : LC₅₀ (96h) 27.8 mg/l for rainbow trout**Daphnia** : LC₅₀ (48h) 33.2 mg/l**Algae** : EC₅₀ for chlorella 180 µmol/l**Bird** : LC₅₀ >7900 mg/kg diet for mallard ducks**Bee** : Acute oral NOEL>0.002 mg/bee; Acute percutaneous>0.04 mg/bee**Beneficial sps:** No data**Persistence and degradability**

Half life is between 0.5-1.0 years in general, <42d in calcareous clay, <140 d in coarse, sandy loam.

PACLOBUTRAZOL TECHNICAL**CANARY MATERIAL SAFETY DATA SHEET****13. DISPOSAL CONSIDERATIONS**

Disposal Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local state, and federal health and environmental regulations.

Characteristic Waste : Not Applicable

Listed Waste : Not Applicable

14. TRANSPORT INFORMATION

Class : 6.1
Proper shipping name : Not classified
Packaging group : III
Marine Pollutant : Yes
Other applicable information : None

15. REGULATORY INFORMATION

Symbol(s) : Xn Harmful.
: N Dangerous for the Environment.

Risk Phrases: R20/22 Harmful if swallowed or by inhalation.
:R36 Irritating to the eyes.
:R51/53 Toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Safety Phrases: S1/2 Keep locked up and out of reach of children.
S13 Keep away from food, drink & animal feed stuffs.
S20/21 When using do not eat, drink or smoke.
S25 Avoid contact with eyes.
S36/37 Wear suitable protective clothing and gloves.
S41 In case of fire and/or explosion do not breathe fumes.
S43 In case of fire use water, carbon dioxide or drying agent.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S49 Keep in original container.
S51 Use only in well ventilated area.

Specific provisions: Restricted to professional users. To avoid risks to man and the environment, comply with the directions for use.

PACLOBUTRAZOL TECHNICAL



CANARY

MATERIAL SAFETY DATA SHEET

16. OTHER INFORMATION

All information and instructions provided in this 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. It is the responsibility of persons in 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 recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS