

1:IDENTIFICATION

Chemical Name	(2S,3S)-1-(4-chlorophenyl)-4,4-dimethyl-2-(1,2,4-triazol-1-yl)pentan-3-ol		
Synonyms	Paclobutrazol 23% SC	Trade Name	KATAAR
Uses	Plant growth regulator	Molecular Formula	C ₁₅ H ₂₀ ClN ₃ O
Manufacturer/ Supplier	Ulink AgriTech Pvt. Ltd. Office Nos. 001 And 002, Ground Floor Wing "A" And Nos. 003 And 004 Ground Floor Wing "B", Nyati Tech Park, Wadgaon Sheri, Pune - 411014, Maharashtra		
Emergency Contact	9503095030	E-mail	info@agrostar.in

2:COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS #	Percent or Content (w/w)
Paclobutrazol	76738-62-0	23 %
Propane-1,2-diol	57-55-6	10 %
1,2-Benzisothiazol-3(2H)-one	2634-33-5	0.02 % - 0.04 %

3: HAZARD IDENTIFICATION

Physical/Chemical Hazard:	Acute oral toxicity category 4	Aquatic acute Category 1	Aquatic chronic category 1
Human Health Hazard:	H319 Causes serious eye irritation.	H315 Causes skin irritation.	H361d Toxic to reproduction
Environmental Hazard:	H 410 Very toxic to aquatic life with long-term effects in the aquatic environment. H400: Very toxic to aquatic life		

4:FIRST AID MEASURES

General: First aid personnel should pay attention to their own safety and use protective equipment if there is a potential for exposure to product. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

Inhalation: Move patients to fresh air. Keep the patients warm and at rest. Allow patients to rest. If breathing is irregular or stopped, administer artificial respiration. Immediately seek medical attention.

Ingestion: Rinse mouth.let him/her drink several glasses of water or milk. Do not induce vomiting. If vomiting does occur, let him/her rinse mouth and drink fluids again. Seek medical attention immediately.

Skin Contact: In case of contact with product, immediately wash with plenty of water and soap. Remove and isolate contaminated clothing and shoes. Seek medical attention.

Eye Contact: Rinse immediately with plenty of water for several minutes with eyes wide open. After 5 minutes remove contact lenses if present and continue rinsing with plenty of water. Continue to rinse with eyelid wide open for at least 15-20 minutes. Seek medical attention if irritation develops.

Note to Physician: A specific antidote for exposure is unknown. Gastric lavage and/or administration of activated charcoal can be considered.

5:FIRE FIGHTING MEASURES

Extinguishing Media: Water spray, foam, dry powder, carbon dioxide

Unsuitable Extinguishing Media: Heavy hose streams.

Specific Hazards: Combustion or thermal decomposition will evolve toxic and irritant vapors.

Hazardous Thermal (de)composition:The decomposition products are volatile, toxic and irritant compounds such as nitrogen oxides, hydrogen chloride, carbon monoxide, carbon dioxide, phosphorus pentoxide and various chlorinated organic compounds.

Special Procedures: Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from protected location or maximum possible distance. Dike area to prevent water runoff.

Protection of Fire Fighters: Do not breathe a fumes, Wear a self contained breathing apparatus. Wear protective clothes.

6:ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with spilled material or contaminated surfaces. When dealing with the spillage do not eat, drink or smoke and wear personal protective clothing. Stop the source of the spill immediately if safe to do so. Keep unprotected persons away from the spill area. Avoid and reduce mist formation as much as possible.

Environmental Precaution: Do not allow runoff to enter drains and public waters. Notify the authorities if product enters.

Methods for Cleaning-up: To manage spills, preventative measures like bunding or capping should be considered. For small spills, immediately absorb the liquid with materials like lime or absorbent clay, then collect the contaminated material and clean the area with water and detergent. For large spills or spills in water, containment and collection for proper treatment or disposal are necessary.

7:HANDLING & STORAGE

Handling: Do not smoke, drink, or eat during handling. Wash hands using water and soap. Wear protective clothes, gloves, goggles/face shield to avoid contact and/or inhalation with the product.

Specific Conditions: Due to the potential effect on an unborn child, pregnant women must avoid working with the substance

Storage: Store in dry, cool, closed, well-ventilated and with impermeable floor, without access of unauthorised persons or children. Keep in original container and tightly closed when not in use.Keep product away from seeds, fertilizer, foods and animal feeds.

8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Measures: Avoid personal contact with the product by using closed systems with remote control and mechanical handling. Ensure area has adequate ventilation or local exhaust, with all exhaust gases filtered or treated. Handle in accordance with good industrial hygiene and safety practice.

General Protection: Avoid contact with eyes and skin. While handling the product appropriate chemical-resistant clothing and frequently changing gloves. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing. Pregnant women must avoid the substance due to risk to the unborn child.

Personal Protection: Follow all precautions and instructions on the label. In all other cases the following recommendations would apply.

Respiratory Protection: Always use NIOSH/MSHA approved respiratory protection equipment with a universal filter type.

Skin Protection: Wear appropriate chemical-resistant clothing to prevent skin contact. For most limited-time exposures, waterproof pants and an apron of chemical-resistant material or PE coveralls will suffice; note that contaminated PE coveralls must be discarded. In situations involving excessive or prolonged exposure, barrier laminate coveralls may be necessary. Any clothing or other absorbent material which has been drenched or heavily contaminated must be discarded.

Hand Protection: Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC) or viton. Manual work should be limited and gloves should be changed frequently to prevent small tears and cross-contamination.

Eye Protection: Safety goggles, chemical splash goggles or face shield for eyes protection should be used. Safety showers and eyewash should be easily available.

Others: Wash clothing before reusing.

9: PHYSICAL/CHEMICAL PROPERTIES

Appearance: Liquid	Density: 1.06 g/ml at 20°C	Physical State: Liquid	pH: 7.6 (Undiluted at 25°C)
Colour: White to light beige	Odour : Characteristic	Flash point [°C] > 100	Solubility in water: Dispersible

10: STABILITY & REACTIVITY

Stability: Stable under normal circumstances

Conditions to Avoid: Avoid excessive heat and flame

Hazardous Decomp. products: Thermal decomposition may release compounds such as nitrogen oxides, hydrogen chloride, carbon monoxide, carbon dioxide, phosphorus pentoxide and various chlorinated organic compounds.

Materials to Avoid: Strong acids and alkalis.

11: TOXICOLOGICAL INFORMATION

Rat oral LD50 [mg/kg] : > 5000	Rat inhalation LC50 [mg/l/4h] : > 5.0	Skin irritation (rabbit): Non-Irritant
Dermal (rat) LD50 [mg/kg]: > 2000	Skin Sensitization (Guinea Pig): Non-Sensitizer	Eye irritation (rabbit): Moderate Irritant

12: ECOLOGICAL INFORMATION

Ecotoxicity: Very toxic to aquatic organisms and considered non-toxic to micro- and macroorganisms and birds.

Bees LD50(oral): > 2 µg/bee	Mallard ducks LC50 (8d): > 7913 mg/kg	Earthworms LC50(14d): 1000 mg/kg soil
Rainbow trout LC50 (96 hrs) mg/L: 27.8	Daphnids magna EC50(48h): 35 mg/l	Green algae EC50(96h): > 15.2 mg/l

13: DISPOSAL CONSIDERATION

Waste-disposal Procedures: Dispose of this product only according to the label. Do not contaminate drains, streams, rivers or waterways with the chemical or used container. Disposal of product would usually be by incineration with flue gas scrubbing in an appropriate licensed commercial incinerator. Advice may be obtained from local waste regulation authorities.

Contaminated Packaging: Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14: TRANSPORT INFORMATION

UN No. 3082	Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Paclobutrazol)
Land Transport (ADR/RID): Class-9, Packing Group-III	Sea Transport (IMO/IMDG): Class-9, Packing group-III, Marine Pollutant-Yes
Air Transport (IATA/ICAO): Class-9 Packing group-III, Environmental hazard mark-Yes	

15: REGULATORY INFORMATION

Hazard Symbol: GHS07, GHS08, GHS09	International WHO Toxicity: Class III, slightly hazardous
H-Statements: EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction. EUH401 To avoid risks to human health and the environment, comply with the instructions of use.	

16: OTHER INFORMATION

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