

**MATERIAL SAFETY DATA SHEET**

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General Information No. (229)-245-8845  
In Case of Emergency, Call  
PROSAR: (888)-875-1724

**I. PRODUCT IDENTIFICATION**

Product Name: MONARCH  
Active ingredients: Paclobutrazol (22.3%)  
Chemical Name: ((±)-(R\*,R\*)-b-[(4-chlorophenyl) methyl]-a-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol)

**II. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS number	% by Wt.
Paclobutrazol	76738-62-0	22.3
Inert ingredients including Propylene Glycol, Clay and Proprietary Ingredients	57-55-6	77.7

**III. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

Low toxicity under normal conditions of handling and use.

**IV. FIRST AID MEASURES**

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have affected person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

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**V. FIRE FIGHTING MEASURES**

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Flash Point & Method: Does not flash

**FIRE FIGHTING HAZARDS & PROCEDURES**

Extinguishing Media: For small fires, use foam, carbon dioxide, halon, or dry powder extinguishant. For large fires, use foam or water-fog. Avoid use of water jet. Contain run-off water with, for example, temporary earth barriers.

Fire Fighting Equipment: Wear protective clothing and self-contained breathing apparatus.

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**VI. ACCIDENTAL RELEASE MEASURES**

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**Steps To Be Taken If Material Is Released Or Spilled:**

Wear suitable personal protection during removal of spillages. This means eye protection, chemically resistant gloves, boots and coveralls. Absorb spillage onto sand, soil, or any other suitable absorbent material. Transfer to a container for disposal. Wash spillage area with water. Washings must be prevented from entering surface water drains. Large spills should be handled according to a spill plan. Otherwise, in case of emergency call day or night, Chemtrec, 1-800-424-9300.

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**VII. HANDLING AND STORAGE**

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Safe Handling Advice: Avoid contact with skin and eyes. When using, do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.

Requirements for Storage Rooms: Keep in original containers, tightly closed, out of reach of children. Keep away from food, drink, and animal feeding stuffs. Protect from frost. Do not store near food or within the reach of children.

Additional Information: Read the label before use.

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**VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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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.

Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as nitrile or butyl), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: A respirator is not normally required when handling this product. In case of emergency spills, use a NIOSH approved respirator with any N, R, P, or HE filter.

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**IX. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance: Beige or off-white

Physical State: Opaque liquid

Boiling Point (760 mm Hg): ~ 212 °F

Solubility: Miscible

Density (20°C): 1.08 ± 0.02 g/cm<sup>3</sup>

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**X. STABILITY AND REACTIVITY**

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Stability:	Stable for more than 2 years under normal use and storage conditions. Stable to hydrolysis (pH 4-9) and not degraded by UV light.
Incompatibility:	Oxidizing agents.
Hazardous Decomposition Products:	Combustion or thermal decomposition will evolve toxic and irritant vapors.
Hazardous Polymerization:	Material not known to polymerize.

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**XI. TOXICOLOGICAL INFORMATION**

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Oral LD <sub>50</sub> (rat):	>5,000 mg/kg
Dermal LD <sub>50</sub> (rabbit) :	> 5,050 mg/kg
Inhalation (4-hour) LC <sub>50</sub> (rat):	> 2.40 mg/L
Acute eye irritation (rabbit):	Non-irritant
Acute dermal irritation (rabbit):	Non-irritant
Skin Sensitization (mice):	Is not considered a sensitizer, with an index of <3 in all groups of test animals.

\*Based on paclobutrazol technical data.

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**XII. ECOLOGICAL INFORMATION**

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Ecotoxicity:	
Toxicity to fish: LC <sub>50</sub>	Rainbow trout: 27.8 mg/L Bluegill sunfish: 23.6 mg/L Daphnia magna: 33.2 mg/L

Unlikely to be hazardous to aquatic life.

Avian dietary toxicity: LC <sub>50</sub>	Mallard duck: >20,000 ppm Quail: > 5,000 ppm
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**XIII. DISPOSAL CONSIDERATIONS**

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Discarded product is not considered as a hazardous waste under RCRA, 40 CFR 261.

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

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**XIV. TRANSPORT INFORMATION**

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DOT Status:	Not classified.
UN Number:	Not classified.
NMFC Number:	101685
Class:	065
Proper Shipping Name:	Plant Growth Inhibitor, Modifier, or Regulator
Packaging Group:	Not classified.
Marine Pollutant:	Not classified.
Other Applicable Information:	Not classified.

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**XV. REGULATORY INFORMATION**

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Not classified as hazardous to users.

TSCA (Toxic substances control act) regulations, 40 CFR 710:

This product is a pesticide and is exempt from TSCA regulation.

CERCLA and SARA regulations (40CFR 355,370 and 372): This product does not contain any chemicals subject to the reporting requirements of SARA section 313.

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**XVI. OTHER INFORMATION**

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MSDS Date: 06/03/2011

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