



SAFETY DATA SHEET

Pac-Low

SECTION 1: IDENTIFICATION

Product Name: Pac-Low
EPA Registration No.: 62097-24-53883
Recommended Use: Plant Growth Regulator; See product label for a complete list of uses and use sites.
Restrictions on Use: See product label for any restrictions on the use of this product.
Chemical Family: Not available
Chemical Name of Active Ingredient(s): Paclobutrazol
Manufactured for: Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507

FOR FIRE, SPILL, AND/OR LEAK EMERGENCIES CONTACT: CHEMTREC 1-800-424-9300

FOR MEDICAL EMERGENCIES AND HEALTH AND SAFETY INQUIRIES CONTACT: Safety Call 1-866-897-8050

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: Off-white to beige liquid with almond like odor. Causes eye irritation.

OSHA HCS CLASSIFICATION (29 CFR 1910.1200)

Eye Damage/Irritation	Category 2B
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Signal Word: WARNING
Hazard Statement(s): Causes eye irritation.
Precautionary Statement(s):
Prevention: Wash hands thoroughly after handling.
Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. If eye irritation persists get medical advice/attention.
Storage: No statement required. See section 7 for storage information.
Disposal: No statement required. See section 13 for disposal information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Paclobutrazol	76738-62-0	22.3%

*Ingredients not listed or listed with a weight % range are considered a trade secret and are withheld under 29 CFR 1910.1200(i).

SECTION 4: FIRST AID MEASURES	
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 to 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 ON SKIN:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. 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.
IF INGESTED:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed: Eye irritation.

SECTION 5: FIRE-FIGHTING MEASURES	
Suitable Extinguishing Media:	Foam, dry chemical, carbon dioxide or water spray
Unsuitable Extinguishing Media:	Water jet
Hazardous Combustion Products:	Thermal decomposition may produce toxic oxides of carbon and nitrogen.
Special Protective Equipment & Precautions:	Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Foam and/or dry chemical are preferred to minimize environmental contamination. If water is used, dike and collect water to prevent run-off. Wear self-contained breathing apparatus and full fire-fighting turn-out gear (Bunker gear).
Unusual Fire & Explosion Hazards:	This product will burn with flames if ignited. Mechanical sparks, open flames, and certain hot surfaces can serve as ignition sources for this material.

SECTION 6: ACCIDENTAL RELEASE MEASURES	
Personal Precautions:	See Section 8 for personal protection equipment.
Environmental Precautions:	Keep spilled material and any rinsate from contaminating soil or from entering sewage and drainage systems and bodies of water.
Methods for Containment:	Isolate the spill area. Keep unnecessary and unprotected personnel from entering. Absorb small spills with sand, vermiculite or other inert absorbent. Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify and scrape up for disposal.
Methods for Clean-up:	Place contaminated material in appropriate container for disposal. After removal, flush contaminated area thoroughly with water. Pick up wash liquid with additional absorbent and place in a disposable container. Do not put spilled material back in the original container.
Other Information:	None known

SECTION 7: HANDLING AND STORAGE

Handling: RECOMMENDATIONS ARE INTENDED FOR MANUFACTURING, PACKAGING AND COMMERCIAL BLENDING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Handle and open container in a manner as to prevent spillage. Do not eat, drink or smoke while handling this product. Immediately wash off accidental splashes of the concentrate or spray mixture from skin, clothing and out of eyes.

Storage: See pesticide label for full information on product storage. Do not contaminate water, food or feed by storage of this product. Store away from sources of heat, out of direct sunlight and away from incompatible materials. Pesticides should be stored in secured areas away from children and animals.

Storage Temperature (Min/Max): Protect from freezing.

Product Incompatibilities: Oxidizing agents

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Users of a pesticide product must refer to the product label for personal protective equipment requirements.

Exposure Guidelines:

COMPONENT	OSHA PEL	ACGIH TLV	NIOSH REL
No components listed			

Engineering Controls: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

Respiratory Protection: In areas of poor ventilation, use a NIOSH approved respirator with cartridges/canisters approved for pesticides.

Eye Protection: Chemical goggles or safety glasses and full-face shield.

Protective Gloves: Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile, neoprene rubber, polyvinyl chloride (PVC) or Viton.

Other Protective Clothing: Long-sleeved shirt, long pants and chemical resistant footwear plus socks.

General Safety Measures: Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately after handling this product. Wash outside of gloves before removing. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off white/beige liquid	Upper/Lower Flammability Limits:	Not determined
Odor:	Almond like	Vapor Pressure:	Not determined
Odor Threshold:	Not determined	Vapor Density:	Not determined
pH (1% dispersion):	7.26	Relative Density (@24°C):	1.068 (typical)
Melting /Freezing Point:	Not applicable	Solubility (water):	26 mb/l @ 20°C
Boiling Point/Range:	212°F	Partition Coefficient:	Not determined
Flash Point:	Below 100°C	Auto-ignition Temperature:	Not determined
Evaporation Rate:	Not determined	Decomposition Temperature:	Not determined
Flammability:	Not applicable	Viscosity:	99.8 to 531.0 mPa/sec dependent on shear rate

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No hazardous chemical reactions known.
Chemical Stability:	Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions:	No potential for hazardous reactions known.
Conditions to Avoid:	None known
Incompatible Materials:	Oxidizing agents
Hazardous Decomposition Products:	Thermal decomposition may produce toxic oxides of carbon and nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	Eye irritation
Oral LD₅₀:	>2,000 mg/kg (rat)
Dermal LD₅₀:	>4,000 mg/kg (rat)
Inhalation LC₅₀:	>250 mg/m ³ (rat)
Eye Irritation/Damage:	Slightly irritating (rabbit)
Skin Corrosion/Irritation:	Non-irritating (rabbit)
Skin Sensitization:	Not a sensitizer (guinea pig)

Chronic/Subchronic Toxicity: For Paclobutrazol technical – Evidence of liver toxicity in repeat dose rodent studies at high dose levels. (1250 ppm, 90 day and 2 year tests). No effects noted in rabbit studies. No adverse health effects are expected in humans at airborne levels below the occupational exposure limit.

Mutagenicity: No data available

Reproductive Toxicity: For Paclobutrazol technical - Dose related increase in minor skeletal defects and evidence of fetotoxicity in rat studies (urogenital defects). No adverse effects seen on reproductive parameters or reproductive organs in a 2-generational rat study. Liver effects were noted at the highest dose level in the FO females and male and female offspring.

Neurotoxicity: No data available

Target Organs: No data available

Aspiration Hazard: Not anticipated to be an aspiration hazard.
Carcinogenicity: For Paclobutrazol technical - No evidence of carcinogenicity in 2-year rodent studies.

Chemical Name	ACGIH	IARC	NTP	OSHA
No components listed				

SECTION 12: ECOLOGICAL INFORMATION

Environmental Hazards Statement from FIFRA Regulated Pesticide Label:

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water or rinsate.

ECOTOXICITY DATA: Data presented below is on the paclobutrazol technical product.
Fish Toxicity: Fish: 96 hour LC₅₀ = 23.6 ppm
Aquatic Invertebrate Toxicity: *Daphnia magna*: 96-hour EC₅₀ 33.2 ppm
Aquatic Plant Toxicity: No data available
Avian Toxicity: Bobwhite quail (8-day dietary): LC₅₀ >20,000 ppm
Honeybee Toxicity: LC₅₀ >50 µg/bee

ENVIRONMENTAL EFFECTS:

Persistence and Degradability: No data available
Bioaccumulation: No data available
Mobility: No data available
Other Adverse Effects: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Refer to the pesticide label for full information on disposal. Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.
Container Disposal: Refer to the pesticide label for full information on disposal. When possible, triple rinse the container and offer for recycling if available.
RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: TRANSPORTATION INFORMATION

DOT (Ground): Not regulated
IMDG (Sea): Not determined
IATA (Air): Not determined

SECTION 15: REGULATORY INFORMATION

Labeling Requirements Under FIFRA: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if swallowed, absorbed through the skin, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear long sleeved shirt and long pants, socks, shoes, and gloves. Remove and wash contaminated clothing before reuse.

TSCA Inventory: This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

SARA Title III Information:

Section 302 – Extremely hazardous substances: None

Section 311/312 – Hazard Categories: Immediate (Acute)

Section 313 – This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS Number	Weight %
None listed		

CERCLA – This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Chemical Name	CAS Number	RQ	Quantity of Finished Product
None listed			

CALIFORNIA PROPOSITION 65:

Chemical Name	CAS Number	Prop 65 Category(ies)
None listed		

U.S. STATE RIGHT-TO-KNOW REGULATIONS:

Chemical Name	New Jersey	Massachusetts	Pennsylvania
None listed			

SECTION 16: OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 1	Instability 0	Special Hazards – None
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