

SAFETY DATA SHEET

1. Identification:	
Product identifier:	Shortstop
Manufactured for:	Greenleaf Chemical, LLC 2352 Schaeffer Hills Drive Henderson, NV 89052 Tel: 702-324-2403
Emergency phone number:	Chemtrec 1-800-424-9300
Recommended use:	Plant growth regulator for trees
EPA reg. number:	80697-4-82866
2. Hazard(s) identification (as defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200):	
<p>Signal word: WARNING Eye irritant: category 2B Aquatic chronic: Category 3 Symbol: none Not classified as hazardous under 29 CFR 1910.1200</p> <p>PRECAUTIONARY STATEMENTS P264 Wash hands thoroughly after handling P273 Avoid release to the environment P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P337+313 If eye irritation persists get medical advice / attention. P391 Collect spillage P501 Dispose of contents/container to an approved waste disposal plant.</p> <p>HAZARD STATEMENTS H320 Causes eye irritation. H412 Harmful to aquatic life with long lasting effects</p> <p>Environmental Hazards 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.</p> <p>Physical or Chemical Hazards Do not use or store near heat or open flame.</p>	
3. Composition:	
Chemical name:	Paclobutrazol
Concentration:	22.3%
CAS number:	76738-62-0 (active ingredient)
4. First aid measures:	
If swallowed:	Call physician or Poison Control Center immediately for treatment advice. Have the 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 a physician. Do not give anything by mouth to an unconscious person.
If inhaled:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable mouth to mouth if possible. Call a Poison Control Center or physician for further treatment advice.
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 for treatment advice.
If in eyes:	Hold eye open and rinse slowly and gently with water for 5-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a Poison Control Center or a physician for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact the National Poison Control Hotline at 1-800-222-1222 for emergency medical treatment information 24 hours a day, seven days a week.

5. Fire fighting measures:

Extinguishing media:	Dry chemical foam or CO ₂ extinguishing media.
Specific hazards:	This product will burn with flames if ignited. This product has a minimum ignition energy between 100 and 300 millijoules. Mechanical sparks, open flames, and certain hot surfaces can serve as ignition sources for this material. Eliminate the presence of mechanical sparks and other ignition sources where dust clouds of this material could form. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
Protective equipment:	Wear full protective clothing and self-contained breathing apparatus with full face piece.

6. Accidental release measures:

Personal precautions:	Refer to Section 8 "Exposure controls/personal protection"
Methods for cleaning up:	Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil, or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible storage container. Once all material is cleaned up and placed in a disposal container, seal the container and arrange for disposition. This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

7. Handling and storage:

KEEP OUT OF REACH OF CHILDREN	
Precautions for safe handling:	Use in a well-ventilated area.
Conditions for safe storage:	Do not contaminate water, food or feed by storage or disposal. Keep container closed when not in use. Do not store near food or feed. Protect from freezing. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area.

8. Exposure controls/personal protection:

Exposure limit:	OSHA PEL: Not listed ACIGH TLV: Not listed
Engineering controls:	No applicable information available.
Individual protection measures:	<p>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.</p> <p>Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the state or tribal agency responsible for pesticide regulation.</p> <p>Eye protection – Use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.</p> <p>Clothing – Wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.</p>

	<p>Gloves – Wear chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC), viton.</p> <p>Respirator – A respirator is not normally required when handling this substance. Use effective engineering controls to comply with the occupational exposure limits.</p> <p>Discard clothing and other absorbent materials that have been heavily contaminated with this product. 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. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under circumstances where air-purifying respirators may not provide adequate protection. In case of emergency spills, use a NIOSH approved respirator with any N, R, P, or HE filter.</p>
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9. Physical and chemical properties:

Appearance:	Off-white/beige liquid
Odor:	Almond like odor
Odor threshold:	No applicable information available
pH (1% in water):	7.26
Melting point/freezing point:	Not applicable
Boiling point:	212°F
Flash point:	Below 100°C
Evaporation rate:	No applicable information available
Flammability:	No applicable information available
Explosive properties:	Not explosive
Vapor pressure:	7.5 x 10(-9) mmHg @ 68°F
Vapor density:	No applicable information available
Relative density (@20°C):	1.068 g/mL
Solubility(ies):	Water: @ 20°C 26 mg/l Fat: No applicable information available
Partition coefficient:	No applicable information available
Auto-ignition temperature:	No applicable information available
Decomposition temperature:	No applicable information available
Viscosity:	99.8 to 531.0 mPa/sec dependant on shear rate

10. Stability and reactivity:

Reactivity:	No applicable information available
Chemical stability:	Stable under standard conditions
Possibility of hazardous reactions:	No applicable information available
Conditions to avoid:	None known
Incompatible materials:	Oxidizing agents (e.g. chlorates, nitrates)
Hazardous decomposition products:	Can decompose at high temperatures forming toxic gas

11. Toxicological information:

Routes of exposure	
Oral:	LD ₅₀ rat ->2,000 mg/Kg (EPA category IV)
Inhalation:	LC ₅₀ rat ->250mg/M ³ (EPA category IV)
Dermal:	LD ₅₀ rat (24h) ->4,000 mg/Kg (EPA category IV)
Irritation	
Eye	(Rabbit) Slightly irritating (EPA category III)
Skin:	(Rabbit) Non irritating (EPA category IV)
Respiratory tract:	No applicable information available
Sensitization	Not a sensitizer
Carcinogenicity:	No evidence of carcinogenicity in 2-year rodent studies.
Mutagenicity:	No applicable information available

Reproductive Toxicity:	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 (active ingredient).
Chronic Toxicity:	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.
NTP/IARC/OSHA listing(s):	No applicable information available

12. Ecological information:

Ecotoxicity:	<ul style="list-style-type: none"> • Fish: LC₅₀ 23.6 ppm • Daphnia: EC₅₀ 33.2 ppm • Birds (8-day dietary – Bobwhite Quail): LC₅₀> 20,000 ppm • Bees: LC₅₀> 50ug/bee
Mobility:	No applicable information available
Persistence and degradability:	No applicable information available
Bioaccumulation potential:	Soil DT50 0.5-1.0 y in general; in calcareous clay loam (pH 8.8, 14% o.m), DT50<42D; in coarse sandy loam (pH 6.8, 4% o.m., DT50)>140 d. Stable in water. Mixes in water (after 24h).

13. Disposal considerations:

Pesticide disposal:

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these cannot be disposed of by use 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.

Container disposal:

Less than or equal to 5 gallons: Non-refillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into the application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn unless allowed by state and local ordinances.

Over 5 gallons: Non-refillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into the application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn unless allowed by state and local ordinances.

14. Transport information:

UN number:	Not applicable
Proper shipping name:	Plant growth inhibitor, modifier or regulator
Class:	Not applicable
Packaging group:	Not applicable

NMFC number/class:	101685/65
Marine pollutant:	Not applicable

15. Regulatory information:

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.

EPA signal word:	CAUTION Classifications under 40 CFR 156.62 stated in sections 9 and 11 where applicable.
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Precautionary statements:	HAZARDS TO HUMANS AND DOMESTIC ANIMALS 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
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Pictograms/symbols:	None
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16. Other information:

The information contained within this SDS is correct to the best of Greenleaf Chemical LLC's knowledge at the time of preparation. It does not purport to be an exhaustive assessment. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. Greenleaf Chemical LLC assumes no responsibility for any incidental or consequential damages arising from the use of this data and expressly disclaims any liability for loss, injury, damages or expenses arising from any failure to take into account the information or advice contained in this document.

This SDS does not replace or modify the EPA-approved product labelling (attached to the product container). It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

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