

SECTION 1: Product and Company Identification

1.1. Product identifier

Trade name : PBZ 2SC
Product code : EPA Reg. No. 62097-24-74779

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/preparation : Plant Growth Regulator

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Rainbow Ecoscience
11571 K-Tel Drive
Minnetonka, MN 55343
Phone: 1-(877) 272-6747 (toll free)
www.Rainbowecoscience.com

1.4. Emergency telephone number

Emergency number : (800)-424-9300 (CHEMTREC)

SECTION 2: Hazards identification

Hazard Symbols :



Signal word : WARNING

Hazard statements (health) : Harmful if swallowed, absorbed through the skin or inhaled.

Precautionary statements : Avoid contact with skin, eyes, or clothing.
Avoid breathing spray mist.

Hazard statements (environmental) : 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.

Hazard statements (physical/chemical) : Do not store near heat or open flame.

SECTION 3: Composition/information on ingredients

| Chemical Name | CAS Number | %/wt. |
|---------------|------------|-------|
| Paclobutrazol | 76738-62-0 | 22.3 |

Ingredients not precisely identified are proprietary or non-hazardous.

SECTION 4: First aid measures

4.1. Description of 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 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 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 or physician 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 poison control center or doctor 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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical, foam, or CO₂ extinguishing media.

5.2. Special hazards arising from the substance or mixture

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.

5.3. Advice for firefighters

Protective Equipment : Wear full protective clothing and self-contained breathing apparatus with full facepiece.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to **Section 8 “Exposure controls/personal protection”**

6.2. Environmental precautions

This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

6.3. Methods and materials 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.

SECTION 7: Handling and storage

KEEP OUT OF REACH OF CHILDREN!

7.1. Precautions for safe handling

Precautions for safe handling : Use in a well-ventilated area.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : 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.

SECTION 8: Exposure controls/personal protection

8.1. Personal protective equipment

Exposure Limit:

OSHA PEL: Not Listed

ACIGH TLV: Not Listed

Individual protection measures:

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.

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.

EYE PROTECTION – Use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

CLOTHING – Wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

GLOVES – Wear chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC), viton.

RESPIRATOR – A respirator is not normally required when handling this substance. Use effective engineering controls to comply with the occupational exposure limits.

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.

8.2. Exposure controls

Engineering Controls:

No applicable information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---------------------------|--|
| Appearance | : Off-white/beige liquid |
| Odor | : No data available |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting/freezing point | : No data available |
| Boiling point | : Approx. 212 °F |
| Flash point | : Does not flash |
| Flammability | : No data available |
| Explosive properties | : No data available |
| Vapor pressure | : Paclobotrazol: 7.5×10^{-9} mmHg @ 68 °F (20 °C) |
| Vapor density | : No data available |
| Relative density | : 1.09 g/ml |
| Solubility(ies) | : Water: 26 mb/l @ 20 °C Fat: No applicable information available |
| Partition coefficient | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No applicable information available

10.2. Chemical stability

Stable under standard conditions.

10.3. Possibility of hazardous reactions

No applicable information available

10.4. Conditions to avoid

None known

10.5. Incompatible materials

Oxidizing agents (e.g. chlorates, nitrates)

10.6. Hazardous decomposition products

Can decompose at high temperatures forming toxic gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Based on an evaluation of the ingredients and/or similar products.

| ACUTE TOXICITY | | |
|-------------------|----------|-------------------------------------|
| Oral | LD50 rat | >2000 mg/kg body weight |
| Inhalation | LC50 rat | >250 mg/M ³ air |
| Dermal | LD50 rat | >2000 mg/kg body weight |
| Irritation | | |
| Eye Contact | Rabbit | Slightly irritating |
| Skin Contact | Rabbit | Non-irritating |
| Respiratory tract | - | No applicable information available |
| Sensitization | unknown | 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. |

SECTION 12: Ecological information

12.1. Toxicity

ECOTOXICITY:

| | |
|---|---------------|
| Fish: LC ₅₀ | : 23.6 ppm |
| Daphnia: EC ₅₀ | : 33.2 ppm |
| Bird (8-day dietary – Bobwhite Quail): LC ₅₀ | : >20,000 ppm |
| Bees: LC ₅₀ | : >50 ug/bee |

12.2. Persistence and degradability

No applicable information available.

12.3. Bioaccumulative potential

Soil DT50 0.5-1.0 y in general; in calcareous clay loam (pH 8.8, 14% o.m.), DT50<42 d.; in coarse sandy loam (pH 6.8, 4% o.m.), DT50>140 d. Stable in water. Mixes in water (after 24 h).

12.4. Mobility in soil

No applicable information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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.

SECTION 14: Transport information

| | |
|-----------------------------|---|
| UN number | : Not applicable |
| Proper shipping name | : Plant growth inhibitor, modified or regulator |
| Class | : Not applicable |
| Packaging group | : Not applicable |
| NMFC number/class | : 101685/65 |
| Marine pollutant | : Not applicable |

SECTION 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 |
| 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 |
| Pictograms/symbols | : None |

SECTION 16: Other information

MSDS US

Disclaimer: The information provided by Rainbow Ecoscience. contained herein is given in good faith and correct to the best of our knowledge. However, the information given is designed only as guidance for safe handling, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

REVISED DATE:

REVISED FOR: