

COCREATE GLOBAL TECHNOLOGIES PRIVATE LIMITED

U21009KA2023PTC179006

Registered address: FFK Towers, #445, 2nd Floor, 17th Cross Road, Sector 4, HSR Layout, Bangalore, Bangalore South, Karnataka - 560102, India.

Email: info@scimplify.com

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SAFETY DATA SHEET

Pymetrozine 45% + Dinotefuran 15% WG

1. Identification of the Substance and Supplier

- **Product Name:** Pymetrozine 45% + Dinotefuran 15% WG
- **Chemical Names:**
 - **Pymetrozine:** 4,5-dihydro-6-methyl-4-[(3-pyridylmethylene) amino]-1,2,4-triazin-3(2H)-one
 - **Dinotefuran:** (EZ)-1-methyl-2-nitro-3-(tetrahydro-3-furylmethyl)guanidine
- **CAS Numbers:**
 - **Pymetrozine:** 123312-89-0
 - **Dinotefuran:** 165252-70-0
- **Molecular Formulas:**
 - **Pymetrozine:** C₁₀H₁₁N₅
 - **Dinotefuran:** C₇H₁₄N₄O₃
- **Formulation Type:** Water-Dispersible Granules (WG)
- **Intended Use:** Insecticide used to control sap-feeding insects like aphids, whiteflies, planthoppers, and leafhoppers in agricultural applications
- **Manufacturer/Supplier:** Cocreate Global Technologies Private Limited

2. Hazard Identification

- **Classification (GHS):**
 - Acute Toxicity (Oral): Category 3
 - Acute Toxicity (Inhalation): Category 3
 - Skin Sensitization: Category 1
 - Hazardous to the Aquatic Environment (Acute): Category 1
 - Hazardous to the Aquatic Environment (Chronic): Category 1
- **Signal Word:** Danger

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- **Hazard Statements:**

- H301: Toxic if swallowed.
- H331: Toxic if inhaled.
- H317: May cause an allergic skin reaction.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long-lasting effects.

- **Precautionary Statements:**

- P261: Avoid breathing dust or fumes.
- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves, clothing, and eye protection.
- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P391: Collect spillage.
- P501: Dispose of contents/container according to local regulations.

3. Composition/Information on Ingredients

Ingredient	CAS Number	Concentration (%)
Pymetrozine	123312-89-0	45%
Dinotefuran	165252-70-0	15%
Inert Ingredients -		40%

4. First-Aid Measures

- **Inhalation:** Move the affected person to fresh air. If breathing difficulties occur, seek immediate medical attention.
- **Skin Contact:** Remove contaminated clothing and wash skin thoroughly with soap and water. Seek medical attention if irritation or allergic reaction develops.

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- **Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present. Seek medical attention if irritation persists.
- **Ingestion:** Rinse mouth with water. Do not induce vomiting unless directed by medical personnel. Seek immediate medical attention.

5. Fire-Fighting Measures

- **Extinguishing Media:** Use water spray, dry chemical powder, foam, or carbon dioxide.
- **Special Hazards:** Can release toxic fumes including nitrogen oxides, carbon monoxide, and carbon dioxide upon combustion.
- **Protective Equipment:** Wear self-contained breathing apparatus (SCBA) and full protective gear.

6. Accidental Release Measures

- **Personal Precautions:** Wear appropriate PPE including gloves, goggles, and a respirator. Avoid breathing dust.
- **Environmental Precautions:** Prevent spillage from entering waterways, drains, or soil. Highly toxic to aquatic life.
- **Cleanup Methods:** Contain and collect spillage with inert materials (e.g., sand or soil). Place waste in a properly labeled container for disposal in accordance with local regulations.

7. Handling and Storage

- **Handling:** Avoid inhalation, ingestion, and contact with skin and eyes. Use appropriate PPE and ensure adequate ventilation during use.
 - **Storage:** Store in a cool, dry, and well-ventilated area. Keep away from food, beverages, and animal feed. Store in a tightly closed container away from heat and direct sunlight.
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8. Exposure Controls / Personal Protection

- **Occupational Exposure Limits:** No specific exposure limits established for Pymetrozine and Dinotefuran.
- **Engineering Controls:** Provide adequate ventilation and use local exhaust systems to minimize exposure.
- **Personal Protective Equipment (PPE):**
 - **Respiratory Protection:** Use an approved respirator if dust or fumes are generated.
 - **Hand Protection:** Chemical-resistant gloves.
 - **Eye Protection:** Safety goggles or face shield.
 - **Skin Protection:** Wear protective clothing and footwear.

9. Physical and Chemical Properties

Property	Value
Appearance	Off-white to light brown granules
Odor	Mild characteristic odor
pH (1% solution)	5.0–7.0
Melting Point	217°C (Pymetrozine), 106°C (Dinotefuran)
Solubility in Water	0.29 g/L (Pymetrozine), 39.83 g/L (Dinotefuran)
Density	~0.6–0.8 g/cm ³
Vapor Pressure	3.1×10^{-6} Pa at 25°C (Pymetrozine)
Partition Coefficient (log Kow)	1.9 (Pymetrozine), -0.54 (Dinotefuran)

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10. Stability and Reactivity

- **Stability:** Stable under normal storage and handling conditions.
 - **Incompatible Materials:** Strong oxidizing agents and strong acids.
 - **Hazardous Decomposition Products:** Releases carbon monoxide, carbon dioxide, and nitrogen oxides upon thermal decomposition.
 - **Conditions to Avoid:** Excessive heat, open flames, and direct sunlight.
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11. Toxicological Information

- **Acute Oral Toxicity (LD50):**
 - Pymetrozine: >5000 mg/kg (rat)
 - Dinotefuran: 2450 mg/kg (rat)
 - **Acute Dermal Toxicity (LD50):** >2000 mg/kg (rat)
 - **Acute Inhalation Toxicity (LC50):**
 - Pymetrozine: >5.8 mg/L (rat, 4 hours)
 - Dinotefuran: >2.69 mg/L (rat, 4 hours)
 - **Skin Irritation:** May cause mild irritation
 - **Eye Irritation:** Slightly irritating
 - **Sensitization:** May cause allergic skin reaction
 - **Chronic Toxicity:** No significant effects observed in long-term studies
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12. Ecological Information

- **Ecotoxicity:**
 - **Fish (Rainbow Trout):** LC50 = 0.74 mg/L (96 hours) (Pymetrozine), 100 mg/L (Dinotefuran)
 - **Daphnia magna:** EC50 = 0.57 mg/L (48 hours) (Pymetrozine), 24 mg/L (Dinotefuran)
 - **Algae:** EC50 = 0.11 mg/L (72 hours) (Pymetrozine), 4.2 mg/L (Dinotefuran)
- **Persistence and Degradability:** Moderately persistent in soil and water.

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- **Bioaccumulative Potential:** Low (Pymetrozine), Very low (Dinotefuran)
 - **Mobility in Soil:** High due to water solubility
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13. Disposal Considerations

- **Waste Disposal:** Dispose of in accordance with local, national, and international regulations.
 - **Contaminated Packaging:** Dispose of packaging as hazardous waste following applicable regulations.
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14. Transport Information

UN Number 2757

Proper Shipping Name Carbamate pesticide, solid, toxic (Pymetrozine, Dinotefuran)

Transport Hazard Class 6.1 (Toxic substances)

Packing Group III

Environmental Hazards Marine pollutant

15. Regulatory Information

- **Regulatory Status:** Complies with all relevant national and international chemical safety regulations.
 - **GHS Label Elements:**
 - Hazard Pictograms:   
 - Signal Word: **Danger**
 - Risk Phrases: R25 (Toxic if swallowed), R43 (May cause sensitization by skin contact), R50/53 (Very toxic to aquatic organisms, may cause long-term adverse effects)
 - Safety Phrases: S36/37/39 (Wear suitable protective clothing, gloves, and eye/face protection), S61 (Avoid release into the environment)
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16. Other Information

- **Disclaimer:** The information provided in this document is believed to be accurate. No warranty is expressed or implied regarding its completeness or accuracy. Always refer to local regulations before handling or disposing of this product.