

SAFETY DATA SHEET (SDS)

Fenbendazole Powder – Research Use Only

Revision Date: 16 November 2025

1. Identification

Product Name: Fenbendazole Powder (Research Grade)

Synonyms: Fenbendazole; methyl 5-(phenylthio)-2-benzimidazolecarbamate

CAS Number: 43210-67-9

Recommended Use: Laboratory research purposes only

Restrictions on Use: Not for human consumption. Not for veterinary use. Not for therapeutic, diagnostic, or clinical applications.

Manufacturer/Supplier:

RT Labs LLC

1402 Broadway ST #105 Longview, WA 98632

503-395-7388

Emergency Contact: RT Labs

2. Hazard(s) Identification

Classification (GHS):

- Acute Toxicity – Oral (Category 4)
- Specific Target Organ Toxicity – Repeated Exposure (Category 2)
- Hazardous to the Aquatic Environment – Chronic (Category 2)

Signal Word: Warning

Hazard Statements:

- H302: Harmful if swallowed
- H373: May cause damage to organs through prolonged or repeated exposure
- H411: Toxic to aquatic life with long lasting effects

Precautionary Statements:

- P260: Do not breathe dust
 - P264: Wash hands thoroughly after handling
 - P270: Do not eat, drink, or smoke when using this product
 - P273: Avoid release to the environment
 - P314: Get medical advice/attention if you feel unwell
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3. Composition / Information on Ingredients

Component | CAS Number | Concentration
Fenbendazole | 43210-67-9 | **99.6 % w/w**
Impurities / Residual Solvents | Proprietary | Balance

4. First-Aid Measures

Inhalation: Move person to fresh air. If breathing is difficult, seek medical attention.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Ingestion: Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Seek medical attention if symptoms occur.

Symptoms: Nausea, abdominal discomfort, dizziness. Prolonged or repeated exposure may affect liver function.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, carbon dioxide (CO₂), dry chemical, foam

Specific Hazards: Thermal decomposition may produce carbon oxides, nitrogen oxides, and sulfur oxides.

Protective Equipment: Self-contained breathing apparatus (SCBA) and full protective gear.

6. Accidental Release Measures

Personal Precautions:

- Wear appropriate PPE (gloves, eye protection, dust mask)
- Avoid generating airborne dust

Environmental Precautions:

- Prevent entry into drains, soil, and waterways

Cleanup Methods:

Carefully sweep or vacuum material into suitable container for disposal. Avoid dust formation. Dispose according to local regulations.

7. Handling and Storage

Handling:

- Use in a well-ventilated laboratory
- Avoid inhalation of dust and contact with skin and eyes
- Follow standard laboratory safety practices

Storage:

- Store at 20–25°C
 - Keep container tightly closed
 - Protect from light and moisture
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8. Exposure Controls / Personal Protection

Occupational Exposure Limits: Not established

Engineering Controls:

- Local exhaust ventilation recommended

Personal Protective Equipment (PPE):

- Lab coat
 - Nitrile gloves
 - Safety glasses or goggles
 - NIOSH-approved dust respirator if airborne particles are generated
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9. Physical and Chemical Properties

Property | Value

Appearance | White to off-white crystalline powder

Odor | Odorless or faint characteristic odor

Melting Point | ~233°C (decomposes)

Solubility | Practically insoluble in water; soluble in organic solvents (e.g., DMSO)

Molecular Formula | C₁₅H₁₃N₃O₂S

Molecular Weight | 299.35 g/mol

10. Stability and Reactivity

Stability: Stable under recommended storage conditions

Conditions to Avoid: Excess heat, moisture, direct light

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition: Carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides

11. Toxicological Information

Acute Toxicity (oral, rat LD50): >10,000 mg/kg (literature value)

Target Organs: Liver (with prolonged or repeated high exposure)

Chronic Effects: Prolonged high-dose exposure in animal studies has been associated with liver enzyme changes.

Carcinogenicity: Not classified by IARC

12. Ecological Information

Ecotoxicity: Toxic to aquatic organisms; may affect invertebrates

Persistence: Moderately persistent in soil

Bioaccumulation: Low to moderate potential

13. Disposal Considerations

Dispose of contents and container in accordance with local, regional, national, and international regulations. Avoid environmental release.

14. Transport Information

UN Number: Not regulated in small research quantities

Environmental Hazard: Yes (aquatic toxicity)

Transport Class: Not classified as dangerous goods in laboratory-scale quantities (verify locally)

15. Regulatory Information

This product is labeled For Research Use Only (RUO).

Not approved by regulatory authorities such as the U.S. Food and Drug Administration for human or veterinary use in this form.

Users are responsible for compliance with applicable chemical handling regulations.

16. Other Information

This SDS is intended for laboratory research settings only.

The information provided is believed to be accurate but is not guaranteed.

Users are responsible for determining the suitability of this material for their specific application.