Safety Data Sheet

Section 1: Chemical Identification

Chemical Name: (2S,5'R)-7-chloro-3',4,6-trimethoxy-5'-methylspiro[1-benzofuran-2,4'-cyclohex-2-ene]-1',3-dione
Alternative Name: Griseofulvin, Fulvicin, Grisactin, Grisovin, (+)-Griseofulvin, Grisefuline, Grisofulvin, Grizeofulvin, Spirofulvin, Amudane
Catalog Number: G-650-25; G-650-50
Recommended use: Griseofulvin is a fungistatic anti-fungal responsible for tinea infections including Microsporum, Epidermophyton, and Trichophyton specimens. This product is not for use in humans. It is intended for research purposes only.
Distributed by: Gold Biotechnology, Inc.
1328 Ashby Rd.
St. Louis, MO 63132
Phone: (314) 890-8778
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Emergency Phone: (800) 248-7609 Mon.-Fri., 9am-5pm CST

Section 2: Hazardous Information

GHS Classification
Skin sensitization (Category 1)
Carcinogenicity (Category 2)
Reproductive toxicity (Category 1B)

GHS Label Elements, including Precautionary statements

DANGER!

Hazard Statements:
H317: May cause an allergic skin reaction
H351: Suspected of causing cancer
H360: May damage fertility or the unborn child

Precautionary Statements:
P201: Obtain special instructions before use
P280: Wear protective gloves
P308 + P313: IF exposed or concerned: Get medical advice/attention

OSHA Hazards
Target Organ Effect, Carcinogen, Skin sensitizer, Teratogen, Reproductive hazard

Potential Health Effects
Eye: May cause eye irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Ingestion: May be harmful if swallowed.
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

HMIS Classification
Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating
Health Hazard: 2
Fire: 0
Reactivity Hazard: 0

Section 3: Composition/Information on Ingredients

Identity: (2S,5'R)-7-chloro-3',4,6-trimethoxy-5'-methylspiro[1-benzofuran-2,4'-cyclohex-2-ene]-1',3-dione
Synonyms: Griseofulvin, Fulvicin, Grisactin, Grisovin, (+)-Griseofulvin, Grisefuline, Grisofulvin, Grizeofulvin, Spirofulvin, Amudane
CAS number: 126-07-8
Molecular Formula: C_{17}H_{17}ClO_{6}
Molecular Weight: 352.77 g/mol

Section 4: First Aid Measures

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin: Wash off with soap and plenty of water. Consult a physician.

Eye: Flush eyes with water as a precaution. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth
Section 5: Fire Fighting Measures

Suitable extinguishing media: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Specific hazards arising from the chemical: During a fire, highly toxic gases may be generated by thermal decomposition or combustion – Carbon oxides, Hydrogen chloride gas.

Special protective actions for fire-fighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Evacuate area. Wear Self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Environmental precautions: Do not let product enter drain.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

Precautions for safe handling: Wear appropriate Government approved respirator, chemical resistant gloves, safety goggles, and all other protective clothing. Mechanical exhaust required. Safety shower and bath. Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: - 20 ºC. Keep in a dry place.

Section 8: Exposure Controls / Personal Protection

Control parameters: Contains no substances with occupational exposure limit values.

Appropriate engineering controls: Use only in a chemical fume hood. Safety shower and eye bath.

Personal Protective Equipment (PPE)
**Eye/Face Protection:** Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin Protection:** The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Other Protective Clothing or Equipment:** Wear appropriate protective clothing to prevent exposure.

### Section 9: Physical and Chemical Properties

- **Appearance:** White powder
- **Odour:** Not available
- **Odour Threshold:** Not available
- **pH:** Not available
- **Melting Point:** 217-224 °C
- **Freezing Point:** Not available
- **Boiling Point/Range:** 570.4 °C
- **Flash Point:** 228 °C
- **Evaporation Rate:** Not available
- **Flammability:** Not available
- **Lower Explosion Limit:** Not available
- **Upper Explosion Limit:** Not available
- **Vapour Pressure:** Not available
- **Vapour Density:** Not available
- **Relative Density:** Not available
- **Solubility:** Water: 0.00864 mg/mL

### Section 10: Stability and Reactivity Data

- **Reactivity:** Not available.
- **Chemical stability:** Stable under recommended storage conditions.
- **Possibility of hazardous reactions:** Not available.
- **Conditions to avoid:** Incompatible materials.
**Incompatible materials:** Strong oxidizing agents.

**Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas.

**Section 11: Toxicological Information**

**Acute toxicity:**
- Oral: \( \text{LD}_{50} \) (Rat) = \( >10,000 \) mg/kg
  \( \text{LD}_{50} \) (Mouse) = \( >50,000 \) mg/kg
- Intravenous: \( \text{LD}_{50} \) (Rat) = 400 mg/kg
  \( \text{LD}_{50} \) (Mouse) = 280 mg/kg
- Intraperitoneal: \( \text{LD}_{50} \) (Rat) = \( >5 \) mg/kg
  \( \text{LD}_{50} \) (Mouse) = 200 mg/kg
- Subcutaneous: \( \text{LD}_{50} \) (Mouse) = \( >12 \) mg/kg

**Skin corrosion/irritation:**
Not available.

**Respiratory or skin sensitization:**
Not available.

**Chronic effects:**
Not available.

**Germ cell mutagenicity:**
Not available.

**Carcinogenicity:**
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:**
May cause reproductive disorders.

**STOT-single exposure:**
Not available.

**STOT-repeated exposure:**
Not available.

**Aspiration hazard:**
Likely routes of exposure:
Respiratory organs, mouth, skin, and eyes.

Symptoms of exposure:
May induce lupus erythematosus. Can cause anorexia, diarrhea, nausea, vomiting. Common adverse reactions are those of hypersensitivity such as skin rashes, urticaria and angioneurotic edema rarely occurring. Reactions of the nervous system include headache, peripheral neuritis, lethargy, mental confusion, fatigue, syncope, vertigo, blurred vision, transient macular edema and impairment of routine task performance. Hematological effects that can occur are leukopenia, neutropenia, monocytosis and punctate basophilia. Other side effects that can occur occasionally are nausea, vomiting, oral thrush, diarrhea, epigastric distress, paresthesias of the hands and feet, gastrointestinal bleeding, menstrual irregularities, and hepatotoxicity. Exposure to and/or consumption of alcohol may increase toxic effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

Toxicity:
Not available.

Persistence and degradability:
Not available.

Bioaccumulative potential:
Not available.

Mobility in soil:
Not available.

Other adverse effects:
Not available.

Section 13: Disposal Considerations
Only professional staff trained in such techniques must undertake waste disposal. Observe all appropriate federal, provincial or state and local regulations. The material for disposal should be mixed with, or dissolved in, a combustible solvent and burnt in a chemical incinerator equipped with an afterburner and scrubber.

Section 14: Transport Information

US Department of Transportation (DOT)
Not dangerous goods.

International Maritime Dangerous Goods (IMDG)
Not dangerous goods.

**International Air Transport Association (IATA)**
Not dangerous goods.

**Section 15: Regulatory Information**

**OSHA Hazards**
Target Organ Effect, Carcinogen, Skin sensitizer, Teratogen, Reproductive hazard

**SARA 302 Components:**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:**
Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components:**
No Components Listed

**Pennsylvania Right To Know Components:**
Griseofulvin
CAS-No. 126-07-8

**New Jersey Right To Know Components:**
Griseofulvin
CAS-No. 126-07-8

**California Prop. 65 Components:**
WARNING! This product contains a chemical known to the State of California to cause cancer.
Griseofulvin
CAS-No. 126-07-8

**Section 16: Other Information**

While Gold Biotechnology, Inc. believes the information contained herein to be true and accurate, it has relied on information provided by others. Gold Biotechnology, INC. makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or with respect to the results to be obtained from the use of the product. Gold Biotechnology, Inc. disclaims all liability with respect to the use of this product, including without limitation, liability for injury to the user or third-party persons.

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