### Material Safety Data Sheet

#### Section 1. Chemical Product and Company Identification

**Common Name/Trade Name**

6-Propyl-2-thiouracil

**Manufacturer**

SPECTRUM LABORATORY PRODUCTS INC.

14422 S. SAN PEDRO STREET

GARDENA, CA 90248

**Commercial Name(s)**

Not available.

**Synonym**

- 2,3-Dihydro-6-propyl-2-thioxo-4-(1H)-pyrimidinone;
- 2-Mercapto-4-hydroxy-6-n-propylpyrimidine;
- 2-Mercapto-6-propylpyrimid-4-one;
- 2-Thio-4-oxo-6-propyl-1,3-pyrimidine;
- 2-Thio-6-propyl-1,3-pyrimidin-4-one;
- 4(1H)-Pyrimidinone;
- 2,3-dihydro-6-propyl-2-thiooxo-;
- 4-Propyl-2-thiouracil;
- 6-n-Propyl-2-thiouracil;
- 6-Thio-4-propyliouracil; Propaci; Propacil; Propilthiouracil; Propicyl; Propyl-thioracil; Propyl-thyracl; Propthiuricil; Prothiurone; Proplyuran; Protiural; Thiuragyl

**Chemical Name**

Uracil, 6-propyl-2-thio

**Chemical Family**

Not available.

**Chemical Formula**

C7-H10-N2-O-S

**Supplier**

SPECTRUM LABORATORY PRODUCTS INC.

14422 S. SAN PEDRO STREET

GARDENA, CA 90248

**NFPA**

- Health Hazard: 1
- Fire Hazard: 1
- Reactivity: 0

**HMS**

- Personal Protective Equipment

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

### Section 2. Composition and Information on Ingredients

**Name**

1) [6-]Propyl-2-thiouracil

**CAS #**

51-52-5

**Exposure Limits**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) [6-]Propyl-2-thiouracil</td>
<td>51-52-5</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

**Toxicological Data on Ingredients**

6-Propyl-2-thiouracil:

ORAL (LD50): Acute: 1250 mg/kg [Rat].

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Continued on Next Page
### Section 3. Hazards Identification

<table>
<thead>
<tr>
<th>Potential Acute Health Effects</th>
<th>Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.</th>
</tr>
</thead>
</table>
| Potential Chronic Health Effects | **CARCINOGENIC EFFECTS**: Classified 2B (Possible for human.) by IARC.  
**MUTAGENIC EFFECTS**: Mutagenic for bacteria and/or yeast.  
**TERATOGENIC EFFECTS**: Not available.  
**DEVELOPMENTAL TOXICITY**: Not available.  
The substance may be toxic to blood, liver, thyroid.  
Repeated or prolonged exposure to the substance can produce target organs damage. |

### Section 4. First Aid Measures

<table>
<thead>
<tr>
<th>Eye Contact</th>
<th>Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention if irritation occurs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.</td>
</tr>
<tr>
<td>Serious Skin Contact</td>
<td>Not available.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.</td>
</tr>
<tr>
<td>Serious Inhalation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
</tr>
<tr>
<td>Serious Ingestion</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flammability of the Product</th>
<th>May be combustible at high temperature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash Points</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Not available.</td>
</tr>
<tr>
<td>Products of Combustion</td>
<td>These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).</td>
</tr>
<tr>
<td>Fire Hazards in Presence of Various Substances</td>
<td>Slightly flammable to flammable in presence of heat.</td>
</tr>
</tbody>
</table>
| Explosion Hazards in Presence of Various Substances | Risks of explosion of the product in presence of mechanical impact: Not available.  
Risks of explosion of the product in presence of static discharge: Not available. |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemical powder.  
LARGE FIRE: Use water spray, fog or foam. Do not use water jet. |
| Special Remarks on Fire Hazards | As with most organic solids, fire is possible at elevated temperatures.  
When heated to decomposition it emits toxic fumes of nitrogen oxide and sulfur oxide. |
| Special Remarks on Explosion Hazards | Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |

**Continued on Next Page**
### Section 6. Accidental Release Measures

**Small Spill**
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill**
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

### Section 7. Handling and Storage

**Precautions**
- Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

**Storage**

### Section 8. Exposure Controls / Personal Protection

**Engineering Controls**
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection**
- Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Dust respirator is recommended when ventilation is not adequate and handling of material causes generation of visible dust clouds. Gloves.

**Personal Protection in Case of a Large Spill**
- Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits**
Not available.

### Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical state and appearance</th>
<th>Odor</th>
<th>Odorless.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>170.23 g/mole</td>
<td>Taste</td>
</tr>
<tr>
<td>pH (1% soln/water)</td>
<td>Not available.</td>
<td>Color</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Melting Point</td>
<td>218°C (424.4°F) - 221°C</td>
<td></td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Water/Oil Dist. Coeff.</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Ionicity (in Water)</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Dispersion Properties</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>Partially soluble in hot water. Very slightly soluble in cold water. Insoluble in diethyl ether.</td>
<td></td>
</tr>
</tbody>
</table>

**Continued on Next Page**
### Section 10. Stability and Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>The product is stable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Excess heat, incompatible materials, dust generation</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents, acids, alkalis.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

| Special Remarks on Reactivity | Not available.         |
| Special Remarks on Corrosivity | Not available.         |
| Polymerization | Will not occur.        |

### Section 11. Toxicological Information

#### Routes of Entry
- Inhalation
- Ingestion

#### Toxicity to Animals
- Acute oral toxicity (LD50): 1250 mg/kg [Rat].

#### Chronic Effects on Humans
- **CARCINOGENIC EFFECTS:** Classified 2B (Possible for human.) by IARC.
- **MUTAGENIC EFFECTS:** Mutagenic for bacteria and/or yeast.
- May cause damage to the following organs: blood, liver, thyroid.
- Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

#### Other Toxic Effects on Humans
- May cause adverse reproductive effects and birth defects (teratogenic).
- May affect genetic material (mutagenic).
- May cause cancer.
- Human: passes through the placenta, excreted in maternal milk. It is capable of cause fetal hypothyroidism and goiter.

#### Special Remarks on Toxicity to Animals
- Not available.

#### Special Remarks on Chronic Effects on Humans
- May cause adverse reproductive effects and birth defects (teratogenic).
- May affect genetic material (mutagenic).
- May cause cancer.
- Human: passes through the placenta, excreted in maternal milk. It is capable of cause fetal hypothyroidism and goiter.

#### Special Remarks on other Toxic Effects on Humans
- **Acute Potential Health Effects:**
  - Skin: May cause skin irritation.
  - Eyes: May cause eye irritation.
  - Inhalation: May cause respiratory tract irritation.
  - Ingestion: It can cause headache, nausea, abdominal discomfort, dizziness, drowsiness, loss of taste and it can suppress thyroid function. Effects on the liver (hepatitis, jaundice, increase in liver function enzymes), and kidneys (nephritis), blood (agranulocytosis, coumarin-like anticoagulant effect, aplastic anemia, pancytopenia, hemolytic anemia) may occur but are rarer with acute exposure.
- **Chronic Potential Health Effects:**
  - Ingestion: Chronic exposure to lower doses in the absence of underlying hyperthyroidism would be expected to depress thyroid function and result in hypothyroidism. It can also affect the liver and kidneys. Chronic ingestion can produce immunological reactions including agranulocytosis, milder leukopenias, thrombocytopenia, eosinophilia, pancytopenia, aplastic anemia, hemolytic anemia, vasculitis, pleuritis, lupus-like syndrome, arthritis, and hepatitis.
  - Other symptoms may include decreased resistance to infections, purpuric, papular rash, stiffness in joints (arthritis, paresthesias, headache, nausea, loss or depigmentation of hair, drug fever, abdominal discomfort, dizziness, loss of taste, drowsiness, nephritis. Respiratory distress syndrome, productive cough, hemoptysis and pulmonary lesions may also occur.
Section 12. Ecological Information

Ecotoxicity
Not available.

BOD5 and COD
Not available.

Products of Biodegradation
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation
The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation
Not available.

Section 13. Disposal Considerations

Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification
Not a DOT controlled material (United States).

Identification
Not applicable.

Special Provisions for Transport
Not applicable.

DOT(Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute:
6-Propyl-2-thiouracil
California prop. 65 (no significant risk level): 6-Propyl-2-thiouracil: 0.0007 mg/day (value)
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: 6-Propyl-2-thiouracil
Illinois toxic substances disclosure to employee act: 6-Propyl-2-thiouracil
New York release reporting list: 6-Propyl-2-thiouracil
Rhode Island RTK hazardous substances: 6-Propyl-2-thiouracil
Pennsylvania RTK: 6-Propyl-2-thiouracil
Minnesota: 6-Propyl-2-thiouracil
Massachusetts RTK: 6-Propyl-2-thiouracil
New Jersey: 6-Propyl-2-thiouracil
California Director's List of Hazardous Substances: 6-Propyl-2-thiouracil
TSCA 8(b) inventory: 6-Propyl-2-thiouracil

California Proposition 65 Warnings
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: 6-Propyl-2-thiouracil
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

Continued on Next Page
**Propyl-thiouracil**


EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 200-103-2).

Canada: Listed on Canadian Non-Domestic Substance List (NDSL).

China: Not listed on National Inventory.

Japan: Listed on National Inventory (ENCS).

Korea: Listed on National Inventory (KECI).

Philippines: Listed on National Inventory (PICCS).

Australia: Listed on AICS.

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**Other Classifications**

<table>
<thead>
<tr>
<th><strong>WHMIS (Canada)</strong></th>
<th>CLASS D-2A: Material causing other toxic effects (VERY TOXIC).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S46</strong></td>
<td>If swallowed, seek medical advice immediately and show this container or label.</td>
</tr>
</tbody>
</table>

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**HMIS (U.S.A.)**

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flammability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>Reactivity</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Personal Protection**

<table>
<thead>
<tr>
<th>Specific Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
</tr>
</tbody>
</table>

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**Whmis (Canada) (Pictograms)**

![Pictogram](image1)

**DSCL (Europe) (Pictograms)**

![Pictogram](image2)

**TDG (Canada) (Pictograms)**

![Pictogram](image3)

**ADR (Europe) (Pictograms)**

![Pictogram](image4)

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**Protective Equipment**

- Gloves.
- Lab coat.
- Dust respirator. Be sure to use an approved/certified respirator or equivalent.
- Wear appropriate respirator when ventilation is inadequate.
- Safety glasses.
### Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>3955H</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Medication. Antithyroid drug. It is used therapeutically to suppress thyroid function.</td>
</tr>
</tbody>
</table>

Verified by Sonia Owen.  

CALL (310) 516-8000

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. The Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual condition of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.