Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name/Trade Name: Methimazole
Catalog Number(s): M1137
CAS#: 60-56-0
RTECS: NI8615000
TSCA: TSCA 8(b) inventory: Methimazole
Manufacturer: SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248
Commercial Name(s): Methimazol, Metazolo, Basolan, Danantizol, Favistan, Frentirox, Mercasoly, Thiamazole, Tapazole, Mercapitolzol, Strumazol, Antitroide-GW
Synonym: 1,3-Dihydro-1-methyl-2H-imidazole-2-thione; 1-Methyl-2mercaptoimidazole; 2-Mercapto-1-methylimidazole; Methylmercaptoimidazole
Chemical Name: Imidazole-2-thiol, 1-methyl-
Chemical Family: Not available.
Chemical Formula: C4-H6-N2-S
Supplier: SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Section 2. Composition and Information on Ingredients

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) Methimazole</td>
<td>60-56-0</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients

Methimazole:
ORAL (LD50): Acute: 2250 mg/kg [Rat]. 860 mg/kg [Mouse].

Section 3. Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
- CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
- MUTAGENIC EFFECTS: Not available.
- TERATOGENIC EFFECTS: Classified POSSIBLE for human.
- DEVELOPMENTAL TOXICITY: Not available.
  The substance is toxic to thyroid.
  The substance may be toxic to blood, liver.
  Repeated or prolonged exposure to the substance can produce target organs damage.

Continued on Next Page
**Section 4. First Aid Measures**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye Contact</strong></td>
<td>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. Get medical attention.</td>
</tr>
<tr>
<td><strong>Skin Contact</strong></td>
<td>In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.</td>
</tr>
<tr>
<td><strong>Serious Skin Contact</strong></td>
<td>Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></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><strong>Serious Inhalation</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.</td>
</tr>
<tr>
<td><strong>Serious Ingestion</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Section 5. Fire and Explosion Data**

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

**Section 6. Accidental Release Measures**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Spill</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Large Spill</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>

**Section 7. Handling and Storage**

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Precautions</strong></td>
<td>Keep away from heat. Keep away from sources of ignition. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 40°C (104°F). Sensitive to light. Store in light-resistant containers.</td>
</tr>
</tbody>
</table>

**Continued on Next Page**
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
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. 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

Physical state and appearance
Solid. (Solid crystalline powder.)

Molecular Weight
114.17 g/mole

pH (1% soln/water)
Not available.

Boiling Point
Decomposition temperature: 280°C (536°F)

Melting Point
147°C (296.6°F)

Critical Temperature
Not available.

Specific Gravity
Not available.

Vapor Pressure
Not applicable.

Vapor Density
Not available.

Volutility
Not available.

Odor Threshold
Not available.

Water/Oil Dist. Coeff.
The product is more soluble in water; log(oil/water) = -0.3

Ionicity (in Water)
Not available.

Dispersion Properties
See solubility in water, diethyl ether.

Solubility
Soluble in cold water, hot water.
Partially soluble in diethyl ether.
Soluble in alcohol, chloroform, pyridine.
Sparingly soluble in petroleum ether.
Slightly soluble in benzene.
Solubility in water: 1 g/5 ml water.
Solubility in ether: 1 g/125 ml ether.
Solubility in chloroform: 1 g/4.5 ml chloroform.
Solubility in alcohol: 1 g/5 ml alcohol.

Section 10. Stability and Reactivity Data

Stability
The product is stable.

Instability Temperature
Not available.

Conditions of Instability
Not available.

Incompatibility with various substances
Not available.

Corrosivity
Non-corrosive in presence of glass.

Special Remarks on Reactivity
Sensitive to light.

Continued on Next Page
**Section 11. Toxicological Information**

**Routes of Entry**
Inhalation. Ingestion.

**Toxicity to Animals**
Acute oral toxicity (LD50): 860 mg/kg [Mouse].

**Chronic Effects on Humans**
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
TERATOGENIC EFFECTS: Classified POSSIBLE for human.
Causes damage to the following organs: thyroid.
May cause damage to the following organs: blood, liver.

**Other Toxic Effects on Humans**
Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals**
Not available.

**Special Remarks on Chronic Effects on Humans**
May cause cancer based on animal test data. Evidence for carcinogenicity in humans is inadequate.
Excreted in maternal milk in human. Passes through the placental barrier in human.
May cause adverse reproductive effects and birth defects (teratogenic). May induce goiter and even cretinism in the developing fetus.
May affect genetic material (mutagenic).

**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 may cause gastrointestinal tract irritation with nausea, vomiting, epigastric distress, behavior/central nervous system/peripheral nervous system (somnolence, headache, malaise, excitement, tremor, spastic paralysis, joint pain).
Chronic Potential Health Effects:
Ingestion: Prolonged or repeated ingestion can affect the skin (skin eruptions), blood (agranulocytosis, granulocytopenia, thrombocytopenia, aplastic anemia, hypoprophrombinemia), endocrine system (thyroid gland, thyroid hypofunction), metabolism (weight loss or decreased weight gain), liver (abnormal liver function, hepatitis, jaundice). Agranulocytosis is potentially the most serious effects. Symtoms of agranulocytosis may include fever, sore throat. Other symptoms of chronic exposure may include nephritis (rarely occurs), periarteritis, abnormal loss of hair, loss of taste, sialadenopathy, and lymphadenopathy.

**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 product itself and its products of degradation are not toxic.

**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: Methimazole


**EINECS:** This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 200-482-4).

**Canada:** Listed on Canadian Domestic Substance List (DSL).

**China:** Listed on National Inventory.

**Japan:** Listed on National Inventory (ENCS).

**Australia:** Listed on AICS.

**Korea:** Not listed on National Inventory (KECI).

**Philippines:** Not listed on National Inventory (PICCS).

**Other Classifications**
- **WHMIS (Canada)** Not controlled under WHMIS (Canada).
- **DSCL (EEC)**
  - R62: Possible risk of impaired fertility.
  - R63: Possible risk of harm to the unborn child.
- **HMIS (U.S.A.)**

### WHMIS (Canada) (Pictograms)

### DSCL (Europe) (Pictograms)
Protective Equipment

- Gloves.
- Lab coat.
- Dust respirator. Be sure to use an approved/certified respirator or equivalent.
- Splash goggles.

Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>M3733</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
| Validated by Sonia Owen on 11/8/2012. | Verified by Sonia Owen.  
Printed 11/8/2012. |

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This 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 conditions 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.