SAFETY DATA SHEET: THIOUREA

1. IDENTIFICATION

Product Name: THIOUREA
Synonyms: Thiocarbamide; Pseudothiourea; Isothiourea
Formula and Formula Weight: (NH2)2CS  76.12
Integra numbers beginning with: T427.10
Recommended Use: Commercial/industrial use
Restrictions on Use: No information available

INTEGRA Chemical Company
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)
1216 6th Ave N
Kent WA  98032
Phone: 253-479-7000

2. HAZARDS IDENTIFICATION

OSHA Classification:
Acute Toxicity - Oral 4 Harmful if swallowed.
Skin Corrosion/Irritation 2 Causes skin irritation.
Sensitization - Skin 1 May cause an allergic skin reaction.
Carcinogenicity 2 Suspected of causing cancer.
Toxic to Reproduction 2 Suspected of damaging fertility or the unborn child.

Signal Word: WARNING

Precautionary Statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust, fume, gas, mist, vapors, spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye protection, face protection.

Response
Rinse mouth. If swallowed: Call a poison center, doctor if you feel unwell.
If on skin: Wash with plenty of water. If skin irritation or a rash occurs: Get medical advice, attention.
If exposed or concerned: Get medical advice, attention.
Specific treatment (see first aid section on this label)
Take off contaminated clothing and wash it before reuse.

Storage
Store locked up.

Disposal
Dispose of contents, container in accordance with all governmental regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Synonyms</th>
<th>CAS #</th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIOUREA</td>
<td>Thiocarbamide; Pseudothiourea; Isothiourea</td>
<td>00062-56-6</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
Eye Contact: Flush eyes with water for at least 15 minutes. Seek immediate medical attention.
Skin Contact: Remove contaminated clothing. Flush skin with water for at least 15 minutes. Seek medical attention if irritation persists.
Ingestion: If conscious, rinse mouth and give victim large amounts of water. Seek medical attention.
Additional notes: Symptoms and effects include skin, eye, respiratory irritation; coughing, shortness of breath. Possible occupational carcinogen.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide, dry chemical or foam.
Special Equipment and Precautions: Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.
### 6. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>5.0 - 7 at 50 g/l at 20°C</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>175 - 177 °C</td>
</tr>
<tr>
<td>Initial Boiling Point and Boiling Range</td>
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</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable or Explosive</td>
<td>Upper: Not available</td>
</tr>
<tr>
<td>Limits (% by volume in air)</td>
<td>Lower: Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>1.41 Water=1</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in 11 parts water</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>low Pow: -0.92 at 20 °C</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
</tbody>
</table>

### 7. HANDLING AND STORAGE

**Incompatible Materials:** Incompatible with strong acids, strong bases, strong oxidizers. Acrolein, acrylaldehyde, nitric acid.

**Storage and Handling:** Store locked up in a cool, dry, well-ventilated area or cabinet dedicated to the storage of toxic materials. Isolate away from incompatible materials. Keep containers well closed and protect them from physical damage.

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid breathing dust, fume, gas, mist, vapors, spray.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves, protective clothing, eye protection, face protection.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**OSHA & ACGIH Exposure Limits:**

- Thiourea: None identified

**Engineering Controls:** Use adequate general or local exhaust ventilation to keep fume and/or dust levels as low as possible.

**Respiratory Protection:** If use generates dusts, mists or vapors, use a NIOSH approved respirator with a particulate filter.

**Skin/Eye Protective Equipment:** Safety goggles, protective clothing and gloves appropriate for the risk of exposure.

Facilities storing or utilizing this material should have readily accessible eyewash stations and safety showers. Select respirators and other safety equipment in accordance with regulations and based upon the particular conditions of use and risk of exposure. Always use safe chemical-handling and good industrial hygiene practices.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** White crystalline powder
- **Odor:** Odorless
- **Odor Threshold:** Not available
- **pH:** 5.0 - 7 at 50 g/l at 20°C
- **Partition Coefficient:** n-octanol/water: Not available
- **Relative Density:** 1.41 Water=1
- **Solubility:** Soluble in 11 parts water
- **Flash Point:** Not available
- **Evaporation Rate:** Not available
- **Flammability:** Not available
- **Flammable or Explosive:** Upper: Not available, Lower: Not available
- **Vapor Pressure:** Not available
- **Vapor Density:** Not available
- **Auto-Ignition Temperature:** Not available
- **Decomposition Temperature:** Not available
- **Auto-Ignition Temperature:** Not available

### 10. STABILITY AND REACTIVITY

- **Stability:** Stable
- **Reactivity:** No information available
- **Stability:** Stable
- **Reactivity:** No information available
- **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur
- **Conditions to Avoid:** Excessive heat and exposure to light.
- **Incompatibles:** Incompatible with strong acids, strong bases, strong oxidizers. Acrolein, acrylaldehyde, nitric acid.
- **Decomposition Products:** Oxides of nitrogen. Oxides of sulfur. Oxides of carbon.

### 11. TOXICOLOGICAL INFORMATION

**Effects of Over Exposure:**

- **Inhalation:** Harmful if inhaled. Irritating to the upper respiratory tract and mucous membranes. Symptoms include coughing and shortness of breath.
- **Skin Contact:** Contact may cause skin irritation. May cause allergic reaction. Sunlight may aggravate skin injury.
- **Eye Contact:** May irritate or burn the eyes.
- **Ingestion:** Harmful or fatal if swallowed. May affect bone marrow.
- **Chronic Effects:** Repeated or prolonged exposure may cause liver damage, bone marrow damage and damage to blood.
- **Target Organs:** Eyes, skin, blood.
### 15. REGULATORY INFORMATION

Thiourea is listed in the TSCA inventory and in SARA 313.

### 16. OTHER INFORMATION

OSHA SDS #: 26579 rev 101 3/27/2015

NE = Not established, NA = Not applicable or Not available

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***** END OF SDS *****