## Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>2-Amino-5-nitrothiazole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
</tr>
<tr>
<td>Commercial Name(s)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synonym</td>
<td>2-Thiazolamine, 5-nitro-(9CI): 5-Nitro-2-aminothiazole; 5-Nitro-2-thiazolamine; 5-Nitro-2-thiazolylamine; Aminonitrothiazole; Enheptin; Entramin</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>Thiazole, 2-amino-5-nitro-</td>
</tr>
<tr>
<td>Chemical Family</td>
<td>Not available.</td>
</tr>
<tr>
<td>Chemical Formula</td>
<td>C3-H3-N3-O2-S</td>
</tr>
<tr>
<td>Supplier</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
</tr>
</tbody>
</table>

### IN CASE OF EMERGENCY

**CHEMTREC (24hr) 800-424-9300**

**CALL (310) 516-8000**

## 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) {2-}Amino-5-nitrothiazole</td>
<td>121-66-4</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

### Toxicological Data on Ingredients

- **LD₅₀**: Not available.
- **LC₅₀**: Not available.

## Section 3. Hazards Identification

### Potential Acute Health Effects

- Hazardous in case of ingestion.
- Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.

### Potential Chronic Health Effects

- **CARCINOGENIC EFFECTS**: 3 (Not classifiable for human.) by IARC.
- **MUTAGENIC EFFECTS**: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
- **TERATOGENIC EFFECTS**: Not available.
- **DEVELOPMENTAL TOXICITY**: Not available.
- Repeated or prolonged exposure is not known to aggravate medical condition.
### 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>
<tr>
<td>Fire Fighting Media and Instructions</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>Special Remarks on Fire Hazards</td>
<td>As with most organic solids, fire is possible at elevated temperatures</td>
</tr>
<tr>
<td>Special Remarks on Explosion Hazards</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### 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. |

Continued on Next Page
Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles such as oxidizing agents.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area.

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. 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.

Molecular Weight
145.14 g/mole

pH (1% soln/water)
Not available.

Odor
Odorless.

Taste
Bitter. (Slight.)

Color
Ochre or greenish-yellow to orange-yellow. Ochre is a color, usually described as golden-yellow or light yellow brown.

Boiling Point
Not available.

Melting Point
Decomposition temperature: 202°C (395.6°F)

Critical Temperature
Not available.

Specific Gravity
Not available.

Vapor Pressure
Not applicable.

Vapor Density
Not available.

Volatility
Not available.

Odor Threshold
Not available.

Water/Oil Dist. Coeff.
Not available.

Ionicity (in Water)
Not available.

Dispersion Properties
Not available.

Solubility
Very slightly soluble in cold water, diethyl ether. Almost insoluble in Chloroform. Solubility in Ether: 1 g dissolves in 250 g Ether. Soluble in dilute mineral acids. 1 g dissolves in 95% alcohol.

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</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents.</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

<table>
<thead>
<tr>
<th>Routes of Entry</th>
<th>Inhalation. Ingestion.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to Animals</td>
<td>LD50: Not available.</td>
</tr>
<tr>
<td></td>
<td>LC50: Not available.</td>
</tr>
</tbody>
</table>

**Chronic Effects on Humans**
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

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

**Special Remarks on Toxicity to Animals**
Lethal Dose/Conc 50% Kill:
LD50 [Mouse] - Route: Intraperitoneal; Dose: 200 mg/kg

**Special Remarks on Chronic Effects on Humans**
May affect genetic material (mutagenic).
May cause adverse reproductive effects based on animal test data.
May cause cancer based on animal test data.

**Special Remarks on other Toxic Effects on Humans**
Acute Potential Health Effects:
Skin: May cause skin irritation.
Eyes: Dust may cause eye irritation.
Inhalation: Dust may cause respiratory tract irritation.
Ingestion: It may be harmful if swallowed. It may cause digestive tract irritation. The toxicological properties of this substance have not been fully investigated. No toxicity data was found for this compound, but a related compound, 2-Aminothiazole, has been known to affect respiration (hyperpnea, dyspnea), liver, kidneys and also produce weakness, hypotension, mild clonic-tonic and asphyxial convulsions.

### Section 12. Ecological Information

<table>
<thead>
<tr>
<th>Ecotoxicity</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD5 and COD</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**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.

*Continued on Next Page*
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
Massachusetts RTK: 2-Amino-5-nitrothiazole
California Director's List of Hazardous Substances: 2-Amino-5-nitrothiazole
TSCA 8(b) inventory: 2-Amino-5-nitrothiazole

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: No products were found.
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
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 204-490-9).
Canada: Not listed on Canadian Domestic Substance List (DSL).
Canada: Listed on Canadian Non-Domestic Substances List (NDSL)
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Not listed on National Inventory (KECI).
Philippines: Listed on National Inventory (PICCS).
Australia: Listed on AICS.

Other Classifications
WHMIS (Canada) Not controlled under WHMIS (Canada). However, it might be classified as D2A since it has shown limited evidence of carcinogenicity and mutagenicity in aminals. No data is available in humans.

S36/37- Wear suitable protective clothing and gloves.

HMIS (U.S.A.)
Health Hazard 2
Fire Hazard 1
Reactivity 0
Personal Protection E

WHMIS (Canada) (Pictograms)

Continued on Next Page
<table>
<thead>
<tr>
<th>Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust respirator. Be sure to use an approved/certified respirator or equivalent.</td>
</tr>
<tr>
<td>Lab coat.</td>
</tr>
<tr>
<td>Gloves.</td>
</tr>
<tr>
<td>Safety glasses.</td>
</tr>
</tbody>
</table>

### Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>5145A</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>


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.