Section 1. Chemical Product and Company Identification

Common Name/Trade Name: 1,1,3,3-Tetramethylguanidine

Manufacturer: SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Commercial Name(s): Not available.

Synonym: Guanidine, N,N,N',N'-tetramethyl-

Chemical Name: 1,1,3,3-Tetramethylguanidine

Chemical Family: Not available.

Chemical Formula: C5-H13-N3

Catalog Number(s): T2074

CAS#: 80-70-6

RTECS: Not available.

TSCA: TSCA 8(b) inventory: 1,1,3,3-Tetramethylguanidine

CI#: Not available.

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300

CALL (310) 516-8000

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TWA (mg/m³) STEL (mg/m³) CEIL (mg/m³) % by Weight</td>
</tr>
<tr>
<td>1) 1,1,3,3-Tetramethylguanidine</td>
<td>80-70-6</td>
<td></td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients: 1,1,3,3-Tetramethylguanidine
LD50: Not available.
LC50: Not available.

Section 3. Hazards Identification

Potential Acute Health Effects: Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Continued on Next Page
### 1,1,3,3-Tetramethylguanidine

#### Section 4. First Aid Measures

<table>
<thead>
<tr>
<th>Condition</th>
<th>Instructions</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 immediately.</td>
</tr>
<tr>
<td><strong>Skin Contact</strong></td>
<td>In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Get medical attention immediately.</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 immediate 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 immediately.</td>
</tr>
<tr>
<td><strong>Serious Inhalation</strong></td>
<td>Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. <strong>WARNING:</strong> It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.</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. 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><strong>Serious Ingestion</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#### Section 5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flammability of the Product</strong></td>
<td>Flammable.</td>
</tr>
<tr>
<td><strong>Auto-Ignition Temperature</strong></td>
<td>350°C (662°F)</td>
</tr>
<tr>
<td><strong>Flash Points</strong></td>
<td>CLOSED CUP: 50°C (122°F) - 60 C(140 F).</td>
</tr>
<tr>
<td><strong>Flammable Limits</strong></td>
<td>LOWER: 1%  UPPER: 7.5%</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>Flammable in presence of open flames and sparks, of heat.</td>
</tr>
<tr>
<td><strong>Explosion Hazards in Presence of Various Substances</strong></td>
<td>Risks of explosion of the product in presence of mechanical impact: Not available.</td>
</tr>
<tr>
<td></td>
<td>Risks of explosion of the product in presence of static discharge: Not available.</td>
</tr>
<tr>
<td><strong>Fire Fighting Media and Instructions</strong></td>
<td>Flammable liquid, soluble or dispersed in water.</td>
</tr>
<tr>
<td></td>
<td>SMALL FIRE: Use DRY chemical powder.</td>
</tr>
<tr>
<td></td>
<td>LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.</td>
</tr>
<tr>
<td><strong>Special Remarks on Fire Hazards</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Special Remarks on Explosion Hazards</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>
**Section 6. Accidental Release Measures**

**Small Spill**
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: **Neutralize the residue with a dilute solution of acetic acid.**

**Large Spill**
Flammable liquid. Corrosive liquid.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. **Neutralize the residue with a dilute solution of acetic acid.**

**Section 7. Handling and Storage**

**Precautions**
Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Never add water to this product. 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. Keep away from incompatibles such as oxidizing agents, acids.

**Storage**
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

**Section 8. Exposure Controls/Personal Protection**

**Engineering Controls**
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection**

**Personal Protection in Case of a Large Spill**
Splash goggles. Full suit. Vapor 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>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>115.18 g/mole</td>
</tr>
<tr>
<td>pH (1% soln/water)</td>
<td>12.7 [Basic.]</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>160°C (320°F) - 162°C</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.91 - 0.918 (Water = 1)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>0 kPa (0.2 mm Hg) @ 20°C</td>
</tr>
<tr>
<td></td>
<td>2.13 mm Hg @ 25 deg. C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>Water/Oil Dist. Coeff.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Ionicity (in Water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Dispersion Properties</td>
<td>See solubility in water.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in cold water. Solubility in Water: 46.6 g/L @ 25 deg. C.</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>Heat, ignition sources, incompatible materials.</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents, acids.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Reactivity</td>
<td>Incompatible with acid chlorides, acid anhydrides.</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

### Section 11. Toxicological Information

**Routes of Entry**
- Skin contact. Eye contact.

**Toxicity to Animals**
- LD50: Not available.
- LC50: Not available.

**Chronic Effects on Humans**
- May cause damage to the following organs: mucous membranes, skin, eyes.

**Other Toxic Effects on Humans**
- Very hazardous in case of skin contact (irritant), of ingestion.
- Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive).

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

**Special Remarks on Chronic Effects on Humans**
- Not available.

**Special Remarks on other Toxic Effects on Humans**
- Acute Potential Health Effects:
  - Skin: Causes skin burns.
  - Eyes: Causes eye burns.
  - Inhalation: Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi chemical pneumonitis and pulmonary edema. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting.
  - Ingestion: Causes gastrointestinal/digestive tract burns, nausea, vomiting.

### 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.

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

Class 8: Corrosive material
CLASS 3: Flammable liquid.

Identification

: Amine, liquid, corrosive, flammable, n.o.s.(1,1,3,3-Tetramethylguanidine) UNNA: 2734 PG: II

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

TSCA 8(b) inventory: 1,1,3,3-Tetramethylguanidine

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. 201-302-7).
Canada: Listed on Canadian Domestic Substance List (DSL).
China: 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.

Other Classifications

WHMIS (Canada) CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
CLASS E: Corrosive liquid.

DSCL (EEC) R10- Flammable.
R22- Harmful if swallowed.
R34- Causes burns.

S16- Keep away from sources of ignition - No smoking.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.) Health Hazard 3
Fire Hazard 2
Reactivity 0
Personal Protection

National Fire Protection Association (U.S.A.)

Health 3 0
Flammability
Reactivity
Specific hazard

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1,1,3,3-Tetramethylguanidine

WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment

- Gloves.
- Full suit.
- Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
- Face shield.

Section 16. Other Information

MSDS Code T0209

References Not available.

Other Special Considerations Not available.


CALL (310) 516-8000

Notice to Reader

Continued on Next Page
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.