

## Safety Data Sheet


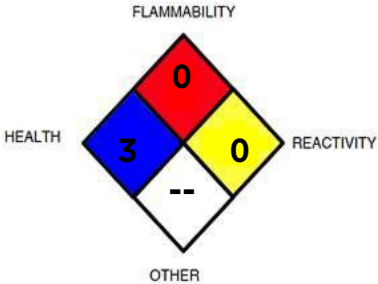
### Section 1: Product & Company Identification

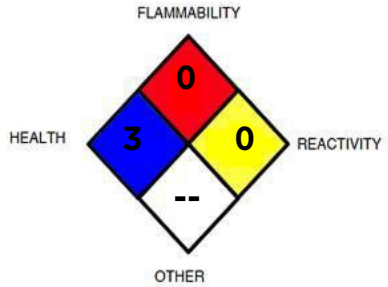
<b>Product Name:</b>	Guanidine Thiocyanate
<b>Product #:</b>	G-2563
<b>Synonyms:</b>	Guanidinium rhodanide; Guanidinium thiocyanate
<b>Supplier:</b>	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
<b>Emergency Tele#:</b>	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

### Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Guanidine thiocyanate	593-84-0	209-812-1	

### Section 3: Hazards Identification

<b>Symbols</b>	
<b>HMIS Classification</b>	<p>FLAMMABILITY</p>  <p>HEALTH 3      FLAMMABILITY 0      REACTIVITY 0      OTHER --</p>

<b>NFPA Classification</b>	
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## Section 4: First Aid Measures

<b>General Overview:</b>	Immediate medical attention is required.
<b>Inhalation:</b>	Remove to fresh air Call a physician or poison control center immediately If not breathing, give artificial respiration If breathing is difficult, give oxygen.
<b>Skin:</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
<b>Eyes:</b>	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
<b>Ingestion:</b>	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.
	See section 11 for more detailed information on health effects & symptoms.

## SECTION 5: Fire Fighting Measures

<b>Flammability of the product:</b>	No data available
<b>Extinguishing Media:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Hazardous thermal (de)composition products:</b>	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes. Hydrogen cyanide. Hydrogen sulfide. Carbon oxides. Nitrogen oxides (NOx).
<b>Special Fire Fighting Procedures:</b>	Wear self-contained breathing apparatus for firefighting if necessary. In the event of fire and/or explosion do not breathe fumes.
<b>Flash Point:</b>	No data available


## Section 6: Accidental Release Measures




<b>Personal Precautions:</b>	Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.
<b>Environmental Precautions:</b>	Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.
<b>Methods for Clean-up:</b>	Prevent further leakage or spillage if safe to do so. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Dam up. After cleaning, flush away traces with water.

## SECTION 7: Handling & Storage

<b>Storage:</b>	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Protect from moisture. Store at room temperature.
<b>Handling:</b>	Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems. Handle in accordance with good industrial hygiene and safety practice. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

## SECTION 8: Exposure controls / Personal Protection

<b>Respiratory Protection:</b>	 <p>If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.</p>
<b>Skin and Body:</b>	

	  <p>Wear protective gloves and protective clothing.</p>
<p><b>Eyes:</b></p>	 <p>Tight sealing safety goggles. Face protection shield.</p>
<p><b>Ventilation/Engineering Measures:</b></p>	<p>Ensure adequate ventilation, especially in confined areas</p>
<p><b>Hygiene:</b></p>	<p>Handle in accordance with good industrial hygiene and safety practice.</p>
<p><b>Other:</b></p>	<p>This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.</p>

## SECTION 9: Physical and Chemical Properties

<b>Appearance &amp; Odor:</b>	Crystalline solid
<b>Formula</b>	$\text{CH}_5\text{N}_3 \cdot \text{HSCN}$
<b>Molecular Wt.</b>	118.16
<b>Melting Pt.</b>	115 - 122°C
<b>Boiling Pt.</b>	No data available
<b>Liquid Density:</b>	1.29 g/cm <sup>3</sup>
<b>Vapor Pressure:</b>	< 0.1 hPa at 25°C
<b>Evaporation Rate:</b>	No data available
<b>Vapor Density:</b>	1
<b>Solubility:</b>	Water
<b>Flash Point:</b>	No data available
<b>Autoignition Temp:</b>	No data available

## SECTION 10: Stability and Reactivity

<b>Stability:</b>	The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. The product is chemically stable under standard ambient conditions (room temperature).
<b>Hazardous decomposition products:</b>	Carbon oxides, Nitrogen oxides (NO <sub>x</sub> ), Sulfur oxides
<b>Materials to Avoid:</b>	A risk of explosion and/or of toxic gas formation exists with the following substances: Acids Generates dangerous gases or fumes in contact with: Acids
<b>Conditions to avoid:</b>	Contact with acids

## SECTION 11: Toxicological Information

<b>RTECS#:</b>	N/A
<b>ACUTE Toxicity:</b>	LD50 Oral = 593 mg/kg (Rat) LD50 Intraperitoneal = 300 mg/kg (Mouse)
<b>CHRONIC Toxicity:</b>	<p>Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.</p> <p>Germ Cell Mutagenicity:            Test Type: Ames test            Test system: S. typhimurium            Metabolic activation: with and without metabolic activation            Method: OECD Test Guideline 471            Result: negative            Test Type: Mutagenicity (mammal cell test): chromosome aberration.            Test system: Human lymphocytes            Metabolic activation: with and without metabolic activation            Method: OECD Test Guideline 473            Result: negative            Test Type: Mutagenicity (mammal cell test): chromosome aberration.            Test system: Chinese hamster fibroblasts            Metabolic activation: without metabolic activation            Method: OECD Test Guideline 473            Result: negative            Test Type: In vitro mammalian cell gene mutation test            Test system: mouse lymphoma cells            Metabolic activation: with and without metabolic activation            Method: OECD Test Guideline 476            Result: negative</p>

<b>Chronic Exposure:</b> <b>Carcinogen:</b> <b>Mutagen:</b> <b>Teratogen:</b> <b>Reproductive:</b>	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>
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## SECTION 12: Ecological Information

<b>Ecotoxicity:</b>	<p>EC50 - Toxicity to daphnia and other aquatic invertebrates- Daphnia - 42.4 mg/l - 48 h.</p> <p>Toxicity to fish: static test LC50 - Poecilia reticulata (guppy) - ca. 89.1 mg/l - 96 h (OECD Test Guideline 203)</p> <p>Toxicity to daphnia and other aquatic invertebrates: static test EC50 - Daphnia magna (Water flea) - 42.4 mg/l - 48 h (OECD Test Guideline 202)</p> <p>Toxicity to algae: static test ErC50 - Desmodesmus subspicatus (green algae) - 130 mg/l -72h</p> <p>Toxicity to bacteria: static test EC50 - activated sludge - &gt; 185 mg/l - 28 h Remarks: (ECHA)</p>
<b>Mobility:</b>	<p>No data available</p>
<b>Persistence and degradability:</b>	<p>Aerobic Dissolved organic carbon (DOC) - Exposure time 28 d          Result: 46 % - Inherently biodegradable.</p>
<b>Bioaccumulative potential:</b>	<p>No data available</p>
<b>Other adverse effects:</b>	<p>No data available</p>
<b>Corrosivity Characteristic:</b>	<p>No data available</p>
<b>General Notes:</b>	<p>To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.</p>

## SECTION 13: Disposal Considerations

<b>Residue Waste or Unused product:</b>	<p>Disposal should be in accordance with applicable regional, national and local laws and regulations.</p>
<b>Contaminated Packaging:</b>	<p>Do not reuse container. Waste codes should be assigned by the user based on the application for which the product was used</p>

## SECTION 14: Transportation Information

<b>UN ID#:</b>	UN1759
<b>ADR / RID (LAND):</b>	Not regulated
<b>DOT regulations:</b>	UN/ID no: UN1759 Hazard Class: 8 Packing Group: III Proper shipping name: Corrosive solids, n.o.s. Description UN1759, Corrosive solids, n.o.s. (Guanidine Thiocyanate), 8, III Emergency Response Guide Number: 154
<b>IMDG/IMO (SEA):</b>	UN/ID no: UN1759 Hazard Class: 8 Packing Group: III Proper shipping name: Corrosive solid, n.o.s. Description UN1759, Corrosive solid, n.o.s. (Guanidine Thiocyanate), 8, III Special Provisions: 223, 274 EmS-No: F-A, S-B
<b>IATA/DGR (AIR):</b>	UN/ID no: UN1759 Hazard Class: 8 Packing Group: III Proper shipping name: Corrosive solid, n.o.s. Description UN1759, Corrosive solid, n.o.s. (Guanidine Thiocyanate), 8, III ERG Code: 8L
<b>Special Provisions:</b>	N/A

## SECTION 15: Regulatory Information

<b>Health Phrases:</b>	Danger! H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H412 Harmful to aquatic life with long lasting effects.
<b>Risk Phrases:</b>	P260 Do not breathe dusts or mists. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/face protection.
<b>Safety Phrases:</b>	P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

	<p>P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>
<b>EU Regulations:</b>	N/A
<b>US Regulations:</b>	<p>TSCA: Listed</p> <p>California Proposition 65: No products were found</p> <p>New Jersey State Right to Know: Listed</p> <p>Pennsylvania State Right to Know: Listed</p>
<b>U.S. Federal Regulations:</b>	<p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: Acute Health Hazard, Chronic Health Hazard</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Acute toxicity - oral (Cat. 4); Acute toxicity - inhalation (Cat. 4); Acute toxicity - dermal (Cat. 4); Skin corrosion (Cat. 1C); Serious eye damage (Cat. 1); Short-term - acute - aquatic hazard (Cat. 3); Long-term - chronic - aquatic hazard (Cat. 3)</p>
<b>WHMIS (Canada):</b>	DSL: Listed

## SECTION 16: Other Information

**LIABILITY STATEMENT:** *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*