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## Material Safety Data Sheet Guanidine nitrate MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Guanidine nitrate

**Catalog Codes:** SLG1840

**CAS#:** 506-93-4

**RTECS:** MF4350000

**TSCA:** TSCA 8(b) inventory: Guanidine nitrate

**CI#:** Not available.

**Synonym:** Aminomethanamidine nitrate

**Chemical Name:** Not available.

**Chemical Formula:** CH<sub>6</sub>N<sub>4</sub>O<sub>3</sub>

**Contact Information:**

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Guanidine nitrate	506-93-4	100

**Toxicological Data on Ingredients:** Guanidine nitrate LD50: Not available. LC50: Not available.

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Extremely hazardous in case of ingestion. Hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

**Potential Chronic Health Effects:**

Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant).  
**CARCINOGENIC EFFECTS:** Not available. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Not available. The substance is toxic to blood, lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

**Skin Contact:**

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:**

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. Seek medical attention.

**Ingestion:**

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...).

**Fire Hazards in Presence of Various Substances:**

Extremely flammable in presence of open flames and sparks, of shocks, of heat. Flammable in presence of organic materials.

**Explosion Hazards in Presence of Various Substances:** Extremely explosive in presence of open flames and sparks, of shocks, of heat, of reducing materials.

**Fire Fighting Media and Instructions:**

Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.

**Special Remarks on Fire Hazards:**

Dangerous fire and explosion risk. May explode when heated. When heated to decomposition it burns or explodes.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

## Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Take precautionary measures against electrostatic discharges. Wear suitable protective clothing If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes Keep away from incompatibles such as reducing agents, combustible materials, organic materials.

**Storage:**

Keep container dry. Keep in a cool place. Ground all equipment containing material. Oxidizing materials should be stored in a separate safety storage cabinet or room.

## 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.

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** 122.08 g/mole

**Color:** Not available.

**pH (1% soln/water):** 7 [Neutral.]

**Boiling Point:** Decomposes.

**Melting Point:** 214°C (417.2°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:** See solubility in water, methanol, acetone.

**Solubility:** Soluble in cold water, methanol, acetone.

### Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Extremely reactive or incompatible with reducing agents, combustible materials, organic materials.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Explodes when heated. Explosion hazard. May explode by detonation, heat or shock.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No.

### Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Ingestion.

**Toxicity to Animals:**

LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:** The substance is toxic to blood, lungs, the nervous system, mucous membranes.

**Other Toxic Effects on Humans:**

Extremely hazardous in case of ingestion. Hazardous in case of skin contact (irritant, sensitizer).

**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:** Not available.

### 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 more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

### Section 14: Transport Information

**DOT Classification:** CLASS 5.1: Oxidizing material.

**Identification:** : Guanidine Nitrate : UN1467 PG: III

**Special Provisions for Transport:** Not available.

### Section 15: Other Regulatory Information

**Federal and State Regulations:** TSCA 8(b) inventory: Guanidine nitrate

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):**

CLASS C: Oxidizing material. CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):**

R36/38- Irritating to eyes and skin. R43- May cause sensitization by skin contact.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 4

**Personal Protection:** E

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

**Health:** 2

**Flammability:** 1

**Reactivity:** 4

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

### Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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