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CHEMICAL & FERTILIZER, LLC**Safety Data Sheet****Section 1 – Chemical Product and Company Identification****Product Name:** Lime Sulfur® Solution**Chemical Name:** CaS_x**Common Name, Synonym:** Inorganic salt solution**Material Uses:** Agricultural Industry, Pesticide - Fungicide**Manufacturer/Manufactured For:** Miller Chemical and Fertilizer, LLC

Phone: (717) 632-8921 FAX: (717) 646-1104 CHEMTREC: (800) 424-9300

Section 2 – Hazard Identification**2.1 Classification of the substance or mixture****GHS Classification (29 CFR 1910.1200)**

Acute Toxicity – Oral (Category 4)

Acute Toxicity – Dermal (Category 4)

Acute Toxicity – Inhalation (Category 4)

Skin Irritation (Category 2)

Eye Irritation (Category 2B)

2.2 Label elements**GHS Labeling Elements**

Pictogram:

Signal Word: Warning

Hazard Statements: Harmful if swallowed. Harmful in contact with skin.

Harmful if inhaled. Causes skin irritation. Causes eye irritation.

Precautionary Statements: Do not eat, drink, or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Wear protective gloves/equipment. Contaminated clothing must not be allowed out of the workplace. If swallowed/inhaled: Call a poison center / doctor if you feel unwell. Rinse mouth. Remove person to fresh air and keep comfortable for breathing. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Dispose of contents/container in accordance with local/regional/national/international regulations.



Product Name: Lime Sulfur® Solution

Section 3 – Hazards Identification

Ingredient Name	CAS Number	%
Calcium Polysulfide, CaS _x	1344-81-6	24-29

PA Right to Know: This product contains proprietary ingredients

This product contains the following chemicals subject to the reporting requirements of Section 13 Title III of the Superfund Amendments and Reauthorization act of 1986 and 40 CFR part 372 (the corresponding CAS numbers and typical percent by weight are also provided).

None

Section 4 – First Aid Measures

EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

SKIN CONTACT

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

INGESTION

If swallowed, DO NOT induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Call a physician immediately!

Section 5 – Fire-Fighting Measures

Flash Point (METHOD):	Not Available
Auto-Ignition:	Not Available
Flammable Limits:	Not Flammable water based
Extinguishing Media:	Use alcohol foam, carbon dioxide, water fog, dry chemical, or halon when fighting fires involving this material.
Special Fire Fighting Procedures:	None currently known.
Unusual Fire and Explosion Hazards:	Oxides of carbon may be generated.



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Section 6 – Accidental Release Measures

Personal precautions

Evacuate non-essential personnel, eliminate ignition sources, and wear protective equipment (See Section VIII). Shut off source of leak only if safe to do so. Wear respiratory equipment if exposure limits are exceeded.

Contain spill

Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non-sparking tools. If required, notify state and local authorities.

Section 6 – Accidental Release Measures *continued*

Disposal Method

Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted facility. Dispose of material in accordance with all Federal, State and Local regulations. Local regulations may be more stringent than Federal or State.

Section 7 – Handling and Storage

Handling: Wear protective equipment when handling. Wash thoroughly after handling. Do not get in eyes. Do not breathe vapor, mist, or dust. Avoid prolonged or repeated contact with skin. Do not swallow.

Storage: For industrial use only. Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children.

Section 8 – Exposure Controls/Personal Protection

Engineering Controls:

Mechanical: Mechanical ventilation is preferred.

Respiratory Protection: Have self-contained breathing apparatus, positive pressure, MSHA/NIOSH (approved or equivalent) available in case of spillage or equipment failure.

	OSHA	ACGIH
	<u>TWA</u> <u>STEL</u>	<u>TLV</u> <u>STEL</u>
Hydrogen Sulfide	20 ppm (ceiling)	10 ppm (ceiling)



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- Eye Protection:** Chemical goggles or face shield. Always wear eye protection when working with chemicals. Never wear contact lenses when working with chemicals.
- Skin Protection:** Rubber gloves. Clean protective body covering, rubber apron, and rubber boots.
- Work Hygienic Practices:** Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking or smoking. If contact occurs, remove contaminated clothing. If needed, take First Aid action shown in Section IV. Launder contaminated clothing before use.
- Other Protective Equipment:** Safety shower, eye wash fountain, and washing facilities should be readily available.

Section 9 – Physical and Chemical Properties

- Appearance:** Ruby-red/liquid/strong odor of rotten eggs
- Odor:** 0.13 ppm faint, but easily noticeable at 0.77 ppm
- pH (aqueous approx. 5% in DW):** 11.5 – 11.7 @ 68°F (20°C)
- Boiling point/Boiling range:** > 212°F
- Freeze Point:** < 0°F
- Flash Point:** Not Determined
- Vapor Pressure (mmHg):** Not Determined
- Vapor Density (Air=1):** Not Determined
- Solubility in Water:** Soluble
- Specific Gravity (H₂O=1 @ 4°C):** 1.27 g/mL @ 68°F (20°C)
- Evaporation Rate (NA=1):** Not Determined
- Percent Volatile by Volume:** Not Determined

Section 10 – Stability and Reactivity

- Chemical Stability:** Stable
- Materials to Avoid:** Strong oxidizers and acids
- Hazardous Decomposition or Byproducts:** Hydrogen sulfide and oxides of sulfur
- Hazardous Polymerization:** Will not occur

Section 11- Toxicological Information

Toxicity Data:



Product Name: Lime Sulfur® Solution

Inhalation: INH-Rat LC₅₀: 3.6 mg/L (4 hr. exposure)
Acute Dermal: LD₅₀(Rabbit): > 2000 mg/kg
Acute Oral Effects: LD₅₀(Rat): 820 mg/kg
Chronic/Carcinogenicity: Not listed in NTP, IARC or by OSHA
Mutagenicity: Data not available
Reproduction: Data not available
Teratogenicity: Data not available

Section 12 – Ecological Information

Ecotoxicity: Green Algae, EC₅₀: 16.4 mg/L
Water Flea, EC₅₀: 13.7 mg/L
Bluegill, LC₅₀: 52.9 mg/L
Flathead Minnow, LC₅₀: 42.9 mg/L
Rainbow Trout, LC₅₀: 8.8 mg/L

Section 12 – Ecological Information *continued*

Bioaccumulative potential: This product is not bioaccumulative
Other adverse effects: None

Section 13 – Disposal Considerations

Disposal: If uncontaminated, recover and reuse as product. If contaminated with other materials, the nature and extent of contamination may require use of specialized disposal methods. Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations

Disposal Regulatory Requirements: Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations

Container Cleaning and Disposal: Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations

Section 14 – Transport Information

U.S. DEPARTMENT OF TRANSPORTATION: *(Not Regulated by DOT)*
PROPER SHIPPING NAME: N/A
PACKING GROUP: N/A
HAZARD CLASS: N/A
LABEL/PLACARD REQUIRED: N/A
UN/NA No.: N/A

WATER TRANSPORTATION



Product Name: Lime Sulfur® Solution

PROPER SHIPPING NAME: N/A
PACKING GROUP: N/A
HAZARD CLASS: N/A
LABEL/PLACARD REQUIRED: N/A
UN/NA No.: N/A

AIR TRANSPORTATION

PROPER SHIPPING NAME: N/A
PACKING GROUP: N/A
HAZARD CLASS: N/A
LABEL/PLACARD REQUIRED: N/A
UN/NA No.: N/A

OTHER AGENCIES: N/A

SECTION 14 NOTES: This product is not considered a hazard

Section 15 – Regulatory Information

EPA Regulations:

Reportable Quantity –CERCLA: Not applicable
SARA Title III (EPCRA): Not applicable
RCRA Waste Code: Not applicable

State Regulations:

CA Proposition 65: Not applicable

EPA National Response Center (800) 424-8802

Section 16 – Other Information

Preparation Date: 05/01/2015

Prepared By: Miller Chemical Regulatory Compliance Officer

Revision Date:

Revision Notes:

NOTICE TO READER: THE INFORMATION CONTAINED IN THIS SAFETY DATA SHEET (“SDS”) RELATES ONLY TO THE SPECIFIC PRODUCT(S) DESIGNATED HEREIN (THE “PRODUCT”). THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CURRENT AND CORRECT AS OF THE DATE OF THIS SDS, AND OBTAINED FROM SOURCES THAT ARE BELIEVED TO BE RELIABLE. HOWEVER, THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, REPRESENTATIONS OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO ACCURACY, CORRECTNESS, OR COMPLETENESS, AND NEITHER MILLER CHEMICAL AND FERTILIZER, LLC. NOR ITS MARKETING AFFILIATES (EACH, A “SELLER”) ASSUME ANY LEGAL RESPONSIBILITY FOR THE USE OR RELIANCE UPON SAME.