



60505-1004

## Safety Data Sheet

### Lime Sulfur Solution®

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03  
Canadian Workplace Hazardous Material Information System (WHMIS) 2015  
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015  
GHS (Globally Harmonized System)

Issue Date 19/Mar/2024  
Print Date 21/Mar/2024

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product name** Lime Sulfur Solution®  
**Pure substance/mixture** Substance

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended use** Pesticide Fungicide  
**Uses advised against** None known

### 1.3. Details of the supplier of the safety data sheet

**Manufacturer** Miller Chemical and Fertilizer, LLC  
120 Radio Rd  
Hanover, PA 17331  
Tel.: 717-632-8921  
Fax.: 717-646-1104

**Internet** <http://www.millerchemical.com>

**E-mail** [info@millerchemical.com](mailto:info@millerchemical.com)

**1.4. Emergency telephone number** CHEMTREC: +1 800 424 9300 or International +1 703 527 3887

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**OSHA Regulatory Status** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**GHS Classification** Acute tox. Oral, Cat. 4; H302  
Skin Irritant Category 2; H315  
Skin Sensitization Category 1; H317  
Eye irritation Cat. 2 H319  
Acute tox. inhalation, Cat. 4; H332  
STOT SE 3; H335

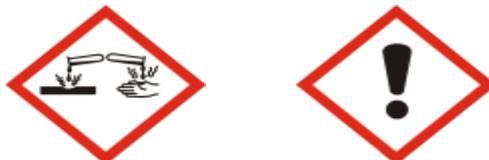
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Aquatic Acute Category 2; H401

**2.2. Label elements****Symbols/Pictograms****Signal Word**

Warning

**Hazard Statements**

H302 + H332 - Harmful if swallowed or inhaled.  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H401 - Toxic to aquatic life

**Precautionary Statements****Prevention**

P261 - Avoid breathing mists/spray.  
P264 - Wash hands thoroughly after handling  
P265 - Do not touch eyes.  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area.  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P102 - Keep out of reach of children

**Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical help. (P305 +P351+P338+P337+P317)  
IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical help. Specific treatment: See Section 4 for additional medical information. Take off contaminated clothing and wash it before reuse. (P302+P352+P333+P317+P321+P362+P364)  
IF SWALLOWED: Get medical help. Rinse mouth. (P301+P317+P330)  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help. (P304+P340+P317)

**Storage**

P403 - Store in a well-ventilated place  
P405 - Store locked up

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Additional information**

Do not mix Lime-Sulfur Solution Agricultural Fungicide with acids or phosphate fertilizer products. Deadly and potentially extremely flammable hydrogen sulfide gas may be emitted. Contact with acids liberates toxic gas.

**Hazards not otherwise classified (HNOC)**

None known

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### SECTION 3: Composition/information on ingredients

Pure substance/mixture                      Mixture

Chemical Name	CAS NUMBER:	Weight-%
Calcium Polysulfide	1344-81-6	29

**Additional information**                      Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

**General Advice**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call toll free 1-866-374-1975. See Label for Additional Precautions and Directions for Use.

**Eye Contact**

IF IN EYES: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

**Skin Contact**

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Ingestion**

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Inhalation**

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**4.2. Most important symptoms and effects, both acute and delayed**

None known.

**4.3. Indication of any immediate medical attention and special treatment needed**

NOTE TO PHYSICIAN Probable mucosal damage may contraindicate gastric lavage.

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**Page** 4 of 11**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable Extinguishing Media**

Water spray (fog). Dry chemical. Foam. Carbon dioxide (CO<sub>2</sub>). Fight larger fires with water spray or alcohol resistant foam.

**Unsuitable Extinguishing Media**

None known.

**5.2. Special hazards arising from the substance or mixture**

When heated or diluted, hydrogen sulfide vapors will evolve. This gas may form explosive mixtures with air. Keep containers/storage vessels in fire area cooled with water spray.

**5.3. Advice for firefighters****Special protective equipment for firefighters**

Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

**Fire-fighting measures**

Evacuate personnel and keep upwind of fire. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Do not allow run-off from firefighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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Page 5 of 11**SECTION 6: Accidental release measures**

- 6.1. Personal precautions, protective equipment and emergency procedures** Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document. Ensure adequate ventilation.
- For non-emergency personnel** Keep unauthorized personnel away.
- For emergency responders** Keep unauthorized personnel away. Use personal protection recommended in Section 8.
- 6.2. Environmental precautions** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.
- 6.3. Methods and material for containment and cleaning up** Dike spill using suitable absorbent or impervious materials such as sand or clay. Collect and contain contaminated absorbent and place in an appropriate container for disposal. Pump any free liquid into an appropriate closed container and decontaminate tools and equipment following cleanup. Collect washings for disposal.
- 6.4. Reference to other sections** See Section 8 for exposure controls and personal protection. See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

- 7.1. Precautions for safe handling** Do not get in eyes, on skin or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.
- 7.2. Conditions for safe storage, including any incompatibilities** Keep pesticide in original container. Store product in a secure locked place, inaccessible to children, pets and livestock. DO NOT put concentrate or dilute into food or drink containers. Keep container in the shade. For help with any spill, leak, fire, or exposure involving this material call day or night CHEMTREC (800) 424-9300.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits** No information available**Biological Limit Values** No information available**8.2. Exposure controls****Engineering Measures** Facilities storing or utilizing this material should be equipped with an eyewash

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station and a safety shower.

**Personal protective equipment**

<b>Eye/Face Protection</b>	Chemical goggles or face shield with safety glasses.
<b>Skin and Body Protection</b>	Wear suitable protective clothing. Wear coveralls over long-sleeved shirt and long pants, chemical resistant footwear plus socks, chemical resistant headgear for overhead exposure, chemical resistant apron when mixing, loading or cleaning equipment or spills.
<b>Hand Protection</b>	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn. Chemical resistant gloves (barrier laminate; butyl, nitrile, neoprene or natural rubber > 14 mils; polyethylene; polyvinyl chloride (PVC) > 14 mils; Viton >14 mils)
<b>Respiratory Protection</b>	In case of inadequate ventilation wear respiratory protection.
<b>Environmental Exposure Controls</b>	Dispose of in accordance with local regulations.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties****Appearance:**

<b>Physical State</b>	Ruby red Liquid
<b>Odor</b>	Strong odor of rotten eggs
<b>pH</b>	10.8
<b>Melting point / Freezing point</b>	Not applicable
<b>Boiling Point / Boiling Range</b>	Not determined
<b>Freezing Point</b>	Not determined
<b>Flash Point</b>	Not determined
<b>Evaporation Rate</b>	Not determined
<b>Flammability (solid, gas)</b>	Not determined
<b>Vapor Pressure</b>	Not determined
<b>Vapor Density</b>	Not determined
<b>Density</b>	10.59 lbs./gal
<b>Water Solubility</b>	Dissolves with precipitation of elemental sulfur
<b>Partition coefficient</b>	No information available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No information available.
<b>Kinematic viscosity</b>	No data available
<b>Oxidizing Properties</b>	Not applicable
<b>Particle Size</b>	No information available
<b>Percent Volatile</b>	Not determined
<b>VOC Content (%)</b>	Not applicable

**9.2. Other information****9.2.1. Information with regard to physical hazard classes**

No data available

**9.2.2. Other safety characteristics**

Not applicable

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**Page** 7 of 11**SECTION 10: Stability and reactivity**

- |   |  |
|---|--|
| <b>10.1. Reactivity</b>                         | Strong oxidizers and acids   |
| <b>10.2. Chemical stability</b>                 | Stable to boiling point, will lose water above this temperature  |
| <b>10.3. Possibility of hazardous reactions</b> | No specific hazard known   |
| <b>10.4. Conditions to avoid</b>                | Exposure to extreme heat or open flames.   |
| <b>10.5. Incompatible materials</b>             | Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Acids, acidic materials or dilution with water will cause the release of hydrogen sulfide, a highly toxic gas. |
| <b>10.6. Hazardous decomposition products</b>   | Heating this product will evolve hydrogen sulfide vapors. Continued heating will also cause oxides of sulfur to be released.   |

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## SECTION 11: Toxicological information

**General Information** Users are advised to consider national Occupational Exposure Limits or other equivalent values.

### Information on Likely Routes of Exposure

<b>Inhalation</b>	Avoid inhalation of the product
<b>Skin</b>	Avoid prolonged or repeated contact with skin
<b>Eyes</b>	Causes serious eye irritation
<b>Ingestion</b>	Avoid ingestion

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Calcium Polysulfide

<b>Group 2A - Probably Carcinogenic to Humans Acute Toxicity</b>	Monograph 53 [1991] ORAL TOXICITY (rat LD50): 820 mg/kg DERMAL TOXICITY (rabbit LD50): > 2,000 mg/kg INHALATION TOXICITY (rat LC50): 3.1 mg/L (4 hours) (female)
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<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation
<b>Skin Corrosion/Irritation</b>	Causes skin irritation
<b>Skin Sensitization</b>	May cause an allergic skin reaction
<b>Mutagenicity</b>	Data not available
<b>Reproductive Toxicity</b>	There is no developmental or reproductive concern at dose levels that exceed the limit dose.
<b>Carcinogenicity</b>	EPA: Not likely to pose carcinogenic hazard to humans ACGIH: Not Listed. NTP: Not Listed IARC: Not Listed. OSHA: Not Listed
<b>Specific target organ toxicity - Single exposure</b>	May cause respiratory irritation

### 11.2. Information on other hazards

<b>11.2.1. Endocrine disrupting properties</b>	This product does not contain any known or suspected endocrine disruptors
<b>11.2.2. Other information</b>	Not applicable

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## SECTION 12: Ecological information

### Calcium Polysulfide

#### **Aquatic toxicity**

#### **96-Hour LC50**

AQUATIC TOXICITY - Chronic  
Aquatic Invertebrate: 11.4 mg/L  
Bluegill sunfish: 14.1 mg/L  
Rainbow trout, *Oncorhynchus mykiss*: 2.4 mg/L  
Fathead Minnow: 9.2 mg/l

#### **12.2. Persistence and degradability**

Calcium polysulfide is expected to rapidly dissociate in the presence of any moisture to form calcium cation and elemental sulfur.

#### **12.3. Bioaccumulative potential**

Does not bioaccumulate

#### **12.4. Mobility in soil**

In the soil system, the modest amounts of calcium and sulfur that result from the use of polysulfide are not believed to be significant when compared to natural background levels.

#### **12.5. Results of PBT and vPvB assessment**

No data available

#### **12.6. Endocrine disrupting properties**

This product does not contain any known or suspected endocrine disruptors

#### **12.7. Other Adverse Effects**

None known

## SECTION 13: Disposal considerations

### **13.1. Waste treatment methods**

#### **Disposal Methods**

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your state Pesticide or Environmental Control Agency or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Nonrefillable and refillable containers. See container label for container handling and disposal instructions. Dispose of contents /container to local and national hazardous waste disposal regulations.

#### **Contaminated Packaging**

Product residue may remain in empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## SECTION 14: Transport information

### **Mode of Transportation (Road, Water, Air, Rail)**

#### **DOT**

Not regulated

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<b>ADR</b>	Not regulated
<b>RID</b>	Not regulated
<b>ADN</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated
<b>ICAO</b>	Not regulated

**14.1. UN number or ID number** None

**14.2. UN proper shipping name** None

**14.3. Transport hazard class(es)** None

**14.4. Packing group** None

**14.5. Environmental hazards** No

**14.6. Special precautions for user** Not applicable

**14.7. Maritime transport in bulk according to IMO instruments**  
Not applicable

### SECTION 15: Regulatory information

**Global Inventories**

**Pure substance/mixture** Mixture

Chemical Name	CAS Number	Canada (DSL)	Mexico	TSCA: United States
Calcium Polysulfide	1344-81-6	Y	N	A

Y: Complies ; A: Active ; - / N: Exempt / Not Listed

**EPA**

**CERCLA**  
Not listed

**SARA 311/312 Hazardous Categorization**  
Immediate (Acute), Delayed (Chronic)

**CWA (Clean Water Act)**  
Not regulated

**CAA (Clean Air Act)**  
Not regulated

**U.S. State Right-to-Know Regulations**

Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Calcium Polysulfide	1344-81-6	N	N	N	N	N

Y: Listed ; N: Not Listed

**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)**  
This product does not contain any Proposition 65 chemicals

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**Page 11 of 11****CANADA****WHMIS**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

**SECTION 16: Other information**

<b>Prepared by</b>	Miller Chemical and Fertilizer, A Huber Company, Global Regulatory Affairs regulatory.affairs@huber.com
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<b>Reason for Version</b>	Revised in entirety. OSHA (Occupational Safety and Health Administration of the US Department of Labor).
<b>Abbreviations and acronyms</b>	OSHA (Occupational Safety and Health Administration of the US Department of Labor) WHMIS (Workplace Hazardous Materials Information System) GHS (Globally Harmonized System) IARC (International Agency for Research on Cancer) PPE (Personal Protection Equipment) TWA (Time-Weighted Average) TLV® (Threshold Limit Value) STEL (Short Term Exposure Limit) RQ (Reportable Quantity) (RQ/% in mixture) DOT (Department of Transportation) TDG (Transport of Dangerous Goods) Canada IATA (International Air Transport Association) IMDG (International Maritime Dangerous Goods) ICAO (International Civil Aviation Organization)
<b>Disclaimer</b>	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**