



Product Name: Searles Lime Sulphur Fungicide – Miticide – Insecticide

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This revision issued: March, 2019

## Section 1 - Identification of The Material and Supplier

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**Chemical nature:** Sulfur present as calcium polysulfur suspension.  
**Trade Name:** Searles Lime Sulphur Fungicide – Miticide – Insecticide  
**Product Code:** 67859  
**Product Use:** Domestic fungicide/miticide/insecticide for use as described on the product label.  
**Creation Date:** May, 2014  
**This version issued:** March, 2019 and is valid for 5 years from this date.  
**Poisons Information Centre: Phone 13 1126 from anywhere in Australia**

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Xi, Irritating. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

**SUSMP Classification:** None allocated.

**ADG Classification:** None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMSBC criteria.

**UN Number:** None allocated



### GHS Signal word: WARNING

#### HAZARD STATEMENT:

AUH031: Contact with acids liberates toxic hydrogen sulfide gas.  
H315: Causes skin irritation.  
H320: Causes eye irritation.  
H335: May cause respiratory irritation.  
H400: Very toxic to aquatic life.

#### PREVENTION

P102: Keep out of reach of children.  
P261: Avoid breathing fumes, mists, vapours or spray.  
P262: Do not get in eyes, on skin, or on clothing.  
P264: Wash contacted areas thoroughly after handling.  
P271: Use only outdoors or in a well ventilated area.  
P280: Wear protective gloves, protective clothing and eye or face protection.

#### RESPONSE

P312: Call a POISON CENTRE or doctor if you feel unwell.  
P362: Take off contaminated clothing and wash before reuse.  
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313: If skin irritation occurs: Get medical advice.  
P337+P313: If eye irritation persists: Get medical advice.  
P370+P378: Not combustible. Use extinguishing media suited to burning materials.

#### STORAGE

## SAFETY DATA SHEET

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P405: Store locked up.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

#### DISPOSAL

P501: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

### Emergency Overview

**Physical Description & Colour:** Clear red liquid.

**Odour:** Strong, unpleasant smell of Hydrogen Sulfide (H<sub>2</sub>S).

**Major Health Hazards:** irritating to eyes, respiratory system and skin.

### Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Sulfur as Calcium Polysulfide (CaS <sub>x</sub> )	1344-81-6	200g/L	not set	not set
Calcium sulfide (CaS)	20548-54-3	<10	not set	not set
Sulfur (elemental)	7704-34-9	<10	not set	not set
Other non hazardous ingredients	various	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

### Section 4 - First Aid Measures

#### General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** If irritation occurs, contact a Poisons Information Centre, or call a doctor. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. In severe cases, symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

**Skin Contact:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

### Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

Fire decomposition products from this product are likely to be harmful if inhaled. Take suitable protective measures.

**Extinguishing Media:** Not combustible. Use extinguishing media suited to burning materials.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** Not applicable - does not burn.

**Flammability Class:** Does not burn.

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## Section 6 - Accidental Release Measures

**Accidental release:** This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Although no special protective clothing is normally necessary because of occasional minor contact with this product, it is good practice to wear impermeable gloves when handling chemical products. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

## Section 7 - Handling and Storage

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** Make sure that containers of this product are kept tightly closed. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

<b>SWA Exposure Limits</b>	<b>TWA (mg/m<sup>3</sup>)</b>	<b>STEL (mg/m<sup>3</sup>)</b>
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Exposure limits have not been established by SWA for any of the known significant ingredients in this product.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

**Skin Protection:** Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Eyebaths or eyewash stations and safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

## Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Clear red liquid.
<b>Odour:</b>	Strong, unpleasant smell of Hydrogen Sulfide (H <sub>2</sub> S).
<b>Boiling Point:</b>	Approximately 100°C at 100kPa.
<b>Freezing/Melting Point:</b>	Below 10°C.
<b>Volatiles:</b>	Water component.
<b>Vapour Pressure:</b>	2.37 kPa at 20°C (water vapour pressure).
<b>Vapour Density:</b>	As for water.
<b>Specific Gravity:</b>	1.25 at 20°C
<b>Water Solubility:</b>	Completely soluble in water.
<b>pH:</b>	10.5-11.0 (as supplied)
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	As for water.
<b>Coeff Oil/water Distribution:</b>	No data
<b>Autoignition temp:</b>	Not applicable - does not burn.

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## Section 10 - Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Keep containers tightly closed. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** acids, strong oxidising agents, zinc, tin, aluminium and their alloys, Reacts with heavy metal ions to form insoluble precipitates..

**Fire Decomposition:** This product is likely to decompose only after heating to dryness, followed by further strong heating. May form oxides of sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds. Most will have a foul odour. Calcium compounds.

**Polymerisation:** This product will not undergo polymerisation reactions.

## Section 11 - Toxicological Information

### Local Effects:

**Target Organs:** There is no data to hand indicating any particular target organs.

**Overall Product:** Irritating to eyes, respiratory system and skin. May be harmful if swallowed. Sufficient Hydrogen sulfide may be released by acid in the digestive system to cause toxic effects and possibly death by paralysis.

### Calcium Polysulfide (as 100% w/w):

Eye Irritation (rabbit): Eye Irritant

Skin Irritation (rabbit): Skin Irritant

### Sulfur (as 100% w/w):

LD<sub>50</sub> Oral (rat): >5000 mg/kg

LD<sub>50</sub> Dermal (rat): >5000 mg/kg

LC<sub>50</sub> Inhal (rat): >9.23 mg/L/4hrs

Eye Irritation (rabbit): Non irritating

Skin Irritation (rabbit): Non irritating

Sensitisation (guinea pig) Non sensitising

Acute - May be irritating to skin, eyes and mucous membranes.

Chronic – Sulfur containing products have been used for many years as fungicides in agriculture without any reported adverse health effects. Sulfur has been shown to be non-mutagenic in micro-organisms.

### Hydrogen Sulfide (decomposition product when acidified)

This is released in small amounts from the product.

Hydrogen Sulfide will be released in large amounts after contact with acid.

Man: lethal at 600 ppm/30 min; lethal immediately at 800 ppm

Man: severe toxic effects 200 ppm (280 mg/m<sup>3</sup>) 1 min; symptoms of illness 50 ppm (70 mg/m<sup>3</sup>)

LC<sub>50</sub> Inhal (rat): 444 ppm

Toxicity LC<sub>50</sub> Inhal (mouse): 634 ppm

Eye Irritation (rabbit): Vapours cause irritation. In general, irritation of the eyes occurs at a concentration of H<sub>2</sub>S of 50 ppm

Acute – Corrosive to skin, eyes and mucous membranes.

Chronic – There are no published reports of carcinogenesis, mutagenesis, or teratogenesis attributable to Hydrogen Sulfide exposure.

## Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Calcium Polysulfide (CaS <sub>x</sub> )	Conc>=20%: Xi; R36/37/38; R31
<ul style="list-style-type: none"> <li>• Eye irritation – category 2</li> <li>• Specific target organ toxicity (single exposure) – category 3</li> <li>• Skin irritation – category 2</li> <li>• Hazardous to the aquatic environment (acute) – category 1</li> </ul>	
Calcium sulphide	
<ul style="list-style-type: none"> <li>• Acute toxicity – category 3</li> <li>• Acute toxicity – category 4</li> <li>• Hazardous to the aquatic environment (acute) – category 1</li> </ul>	
Sulphur (elemental)	

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- Skin irritation – category 2

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## Potential Health Effects

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### Inhalation:

**Short Term Exposure:** Available data indicates that this product is not harmful. However product is an inhalation irritant. Symptoms may include headache, irritation of nose and throat and increased secretion of mucous in the nose and throat. Other symptoms may also become evident, but they should disappear after exposure has ceased.

**Long Term Exposure:** No data for health effects associated with long term inhalation.

### Skin Contact:

**Short Term Exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. However product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

**Long Term Exposure:** No data for health effects associated with long term skin exposure.

### Eye Contact:

**Short Term Exposure:** This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

**Long Term Exposure:** No data for health effects associated with long term eye exposure.

### Ingestion:

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

**Long Term Exposure:** No data for health effects associated with long term ingestion.

### Carcinogen Status:

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

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## Section 12 - Ecological Information

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This product is very toxic to aquatic organisms. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Rapid degradation on soil/vegetation leaving a Sulfur residue. May burn plant leaves: negligible hazards from residues spread by animals. Slight acute hazards from improper cleaning or inadequate disposal.

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## Section 13 - Disposal Considerations

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**Disposal:** Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

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## Section 14 - Transport Information

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**UN Number:** This product is not classified as a Dangerous Good by ADG, IATA or IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

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## Section 15 - Regulatory Information

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**AICS:** We are unable to verify the presence of all of the ingredients in this product on the public AICS database. However this is not a necessary requirement for registered Ag/Vet products. If you have any reason to be concerned about this, we suggest you call us on the number below.

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## Section 16 - Other Information

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**This SDS contains only safety-related information. For other data see product literature.**

### Acronyms:

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number

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<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	United Nations Number

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD STATEMENT: INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (Feb 2016)

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