

Molten Sulphur

Devco Australia Holdings



SAFETY DATA SHEET – SEPTEMBER 2016

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: MOLTEN SULPHUR

Synonyms: Sulphur Molten, Liquid Sulphur

Supplier: Devco Australia Holdings Pty Ltd
ABN: 45 098 077 662
Street Address: 398 Tingira Street
Pinkenba, Qld, 4008
Australia

Telephone No: +61 7 3260 2361
Fax No: +61 7 3260 2431
Emergency No: +61 7 3260 2361
(All Hours)

Section 2 - HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road or Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia – HAZARDOUS SUBSTANCE

Signal Word: WARNING



Hazard Statement: H315 Causes Skin Irritation

Precautionary Statement(s):

Prevention: P264 Wash Hands Thoroughly after handling
P280 Wear Protective Gloves / protective clothing / eye protection / face protection

Response: P302 & P352 If on skin – wash with plenty of soap and water
P321 Specific treatment (see 1st Aid Measures on SDS)
P332 & P313 If skin irritation occurs then get medical advice/attention
P362 Take off contaminated clothing and wash before re-use

Storage: No Storage Statements

Disposal: No Storage Statements

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS No	%
Sulphur	7704-34-9	99.7
Impurities		<0.3

Section 4 - FIRST AID MEASURES

- Inhalation:** Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep them warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek medical advice immediately.
- Ingestion:** Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Immediately give a glass of water. If vomiting occurs give further water. Seek immediate medical advice.
- Eye Contact:** If contact is made with eyes, immediately wash in and around the eyes with large amounts of water for at least 15 minutes. Eyelids must be held apart. Urgently seek medical advice and transport rapidly to hospital or medical centre.
- Skin Contact:** If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor. If molten material should contact the skin and adhere, cool quickly with running water - do not attempt to remove. Seek immediate medical assistance.

For advice contact a Poisons Information Centre (telephone 131 126) or a doctor.

Section 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Coarse water spray, fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem Code: 1Y

Specific Hazards arising from the substance:

Flammable solid. May form flammable vapour mixtures with air.

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Specific protective equipment and precautions for fire fighters:

Avoid all ignition sources. Burns with a light blue flame which is not apparent in daylight. On burning will emit toxic fumes, including those of oxides of sulfur and hydrogen sulphide. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Section 6 - ACCIDENTAL RELEASE MEASURES

Emergency Procedures/Environmental Precautions:

Shut off all possible sources of ignition. Clear area of all unprotected personnel. If contamination of drains or waterways occurs advise local emergency services.

Personal Precautions/Protective Equipment/Methods for cleaning up and containment:

Avoid accidents, clean up immediately as can be slippery when spilt. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind and/or improve ventilation. Allow material to solidify. Collect and seal in properly labelled containers or drums for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in vapour. Take precautions against static discharges.

Conditions for safe storage, including and incompatibilities:

Store in a cool, dry, well ventilated environment, out of direct sunlight. Store away from other sources of heat or ignition. Store at 135-140 °C. Store away from incompatible materials such as oxidizing agents. Keep containers closed when not in use and check regularly for leaks.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters: Safe Work Australia assign no value for this specific material. However, Workplace Exposure Standards apply for combustion products and impurities.

Hydrogen Sulphide: 8 hr TWA=14 mg/m³ (10ppm), 15 min STEL=21 mg/m³ (15 ppm)

Sulphur Dioxide: 8 hr TWA=5.2 mg/m³ (2ppm), 15 min STEL=13 mg/m³ (5 ppm)

TWA calculated over an 8 hr working day, for a 5 day working week
STEL (Short Term Exposure Limit) the airborne concentration of a particular substance calculated as a time weighted average over 15 mins, which should not be exceeded at any time during a normal 8 hr working day.

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Appropriate Engineering Controls: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

Individual Protection Measures such as PPE:

The selection of PPE is dependent upon a detailed risk assessment of the task. The risk assessment should consider the work situation, the physical form of the Sulphur, the handling methods and environmental factors.

Wear overalls, chemical goggles, face shield, apron, rubber boots and long impervious gloves. Avoid generating and inhaling vapours. If determined via a risk assessment that an inhalation risk exists, wear an air supplied respirator meeting the requirements of AS 1715 and AS 1716. Always wash hands before eating, drinking, smoking or using the toilet. Wash contaminated clothing and other protective equipment prior to storage or re-use.



Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Molten liquid
Colour:	Red/yellow
Odour:	Odourless, however impurities may cause a hydrogen sulphide odour ("rotten eggs")
Molecular Formula:	S
Solubility:	Insoluble in water
Specific Gravity:	2.07 at 25°C, 1.8 at 135 °C
Relative vapour density:	>1 (air = 1)
Vapour Pressure:	<0.01 kPa
Flash Point:	168°C
Flammability Limits (%):	0.03 – 2.1 %
Autoignition Temperature	232 °C
Freezing Point:	119.0 °C
Boiling Point:	444.6 °C
pH:	Not applicable

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Section 10 - STABILITY AND REACTIVITY

- Chemical Stability:** Water will sink through molten Sulphur, turn to steam and boil up through the liquid. The force with which the steam is expelled can be considerable enough to eject molten Sulphur into the air
- Possibility of Hazardous Reactions:** Hazardous polymerisation will not occur.
- Conditions to Avoid:** Avoid naked flames and other sources of ignition, including static. Avoid exposure to heat
- Incompatible Materials:** Incompatible with oxidising agents and alkalis
- Hazardous Decomposition Products:** Oxides of Sulphur. Hydrogen Sulphide.
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Section 11 - TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet.

Symptoms or effects if the product is mishandled and over-exposure occurs include:

- Eye Contact:** A severe eye irritant. Corrosive to eyes and contact with eyes can cause corneal damage. Contamination of eyes can lead to permanent injury.
- Ingestion:** Swallowing can result in nausea, diarrhea, vomiting and abdominal pain and chemical burns to the gastrointestinal tract.
- Skin Contact:** Contact with skin may result in irritation
- Inhalation:** Breathing vapour may result in respiratory irritation

Acute Toxicity:

Data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

Oral (rat) LD50: >8437 mg/kg
Oral (rabbit) LDLo: 175 mg/kg

- Chronic Effects:** No information available for sulphur
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Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating drains and waterways

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods: Consult State Land Waste Management Authority for disposal. Dispose of waste containers in accordance with local and/or regional and State regulations.

Section 14 - TRANSPORTATION INFORMATION

Road and Rail Transport: Classified as a Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by road or rail. DANGEROUS GOODS.



UN No. 2448
Transport Hazard Class: 4.1 Flammable Solid
Packing Group: III
Proper Shipping Name: Sulphur, Molten
Hazchem code: 1Y

Marine Transport: Classified as a Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. DANGEROUS GOODS.

UN No. 2448
Transport Hazard Class: 4.1 Flammable Solid
Packing Group: III
Proper Shipping Name: Sulphur, Molten

IMDG EMS Fire: F-A
IMDG EMS Spill: S-H

Air Transport: Transport prohibited under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in any Passenger and/or Cargo aircraft

Section 15 - REGULATORY INFORMATION

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Classification: This product is hazardous according to Work Safe Australia.
HAZARDOUS SUBSTANCE

Hazard Statement: H315 Causes Skin Irritation

Poisons Schedule: None listed

This material is listed on the Australian Inventory of Chemical Substances (AICS)

Section 16 - OTHER INFORMATION

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Issue Date: September 2016

End of SDS