



SAFETY DATA SHEET SULPHUR

SECTION 1: Identification: Product identifier and chemical identity

Product identifier

Product name	SULPHUR
Product No.	S59
CAS number	7704-34-9

Relevant identified uses of the substance or mixture and uses advised against

Application	Rubber industries. Fireworks. Pesticides.
Uses advised against	None known.

Details of the supplier of the safety data sheet

Supplier	Norkem Limited Australia G19, Wheelers Hill Business Centre, 202 Jells Road, Wheelers Hill, Vic 3150, Australia T: +61 (0) 3 9560 0158 F: +61 (0) 3 9561 3935 datasheet@norkem.com
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Emergency telephone number

Emergency telephone	Australian Contact Number: +61 (0) 2801 44558 / 18000 74234 (toll-free) New Zealand Contact Number: +64 (0) 9929 1483 / 0800 446 881 (toll-free) National Poison Information Number: 131126
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SECTION 2: Hazard(s) identification

Classification of the substance or mixture

Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315
Environmental hazards	Not Classified

Label elements

Pictogram



Signal word	WARNING
Hazard statements	H315 Causes skin irritation.

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Precautionary statements	P264 Wash contaminated skin thoroughly after handling.
	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
	P302+P352 IF ON SKIN: Wash with plenty of soap and water.
	P332+P313 If skin irritation occurs: Get medical advice/ attention.
	P362 Take off contaminated clothing.

Other hazards

This substance is not classified as PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).

SECTION 3: Composition and information on ingredients

Substances

Product name	SULPHUR
CAS number	7704-34-9

SECTION 4: First aid measures

Description of first aid measures

General information	Get medical attention if any discomfort continues.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention.
Ingestion	Rinse mouth thoroughly with water. Get medical attention if any discomfort continues. Do not induce vomiting. If swallowed immediately drink water, to which activated charcoal may be added.
Skin Contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove affected person from source of contamination. Rinse with water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

Most important symptoms and effects, both acute and delayed

Inhalation	Burning sensation in mouth. Coughing. Sore throat.
Ingestion	Burning sensation in mouth. Diarrhoea.
Skin contact	Redness. Pain.
Eye contact	Redness. Pain.

Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire. Water spray, dry powder or carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

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Specific hazards	Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m ³ . The product is combustible. Dust may form explosive mixture with air.
Hazardous combustion products	Sulphur dioxide. Sulphurous gases (SO _x). Hydrogen sulphide (H ₂ S).
<u>Advice for firefighters</u>	
Protective actions during firefighting	Contain and collect extinguishing water. Cool containers exposed to flames with water until well after the fire is out.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to Australia/New Zealand Standards AS/NZS 4967 (for clothing) AS/NZS 1801 (for helmets), AS/NZS 4821 (for protective boots), AS/NZS 1801 (for protective gloves) will provide a basic level of protection for chemical incidents.
Hazchem Code	1Z

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Avoid generation and spreading of dust. No smoking, sparks, flames or other sources of ignition near spillage. Take precautionary measures against static discharges.
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Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground. If risk of water pollution occurs, notify appropriate authorities.
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Methods and material for containment and cleaning up

Methods for cleaning up	Avoid generation and spreading of dust. Reduce airborne dust and prevent scattering by moistening with water. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water.
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Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. Collect and dispose of spillage as indicated in Section 13.
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SECTION 7: Handling and storage, including how the chemical may be safely used

Precautions for safe handling

Usage precautions	Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid handling which leads to dust formation. Dust may form explosive mixture with air. Take precautionary measures against static discharges. Use explosion-proof electrical equipment.
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Advice on general occupational hygiene

Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Take off contaminated clothing and wash it before reuse.

Conditions for safe storage, including any incompatibilities

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Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures between 0°C and 40°C. Do not use containers made of the following materials: Stainless steel. Copper. Protect from light.
Storage class	Chemical storage.
Specific end use(s)	
Specific end use(s)	The identified uses for this product are detailed in Section 1.

SECTION 8: Exposure controls and personal protection

Control parameters

Occupational exposure limits

No exposure limits known for ingredient(s).

Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of dust.
Observe any occupational exposure limits for the product or ingredients. Use mechanical ventilation if there is a risk of handling causing formation of airborne dust.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
The following protection should be worn: Dust-resistant, chemical splash goggles.
Personal protective equipment for eye and face protection should comply with Australia/New Zealand Standard AS/NZS 1337.

Hand protection

Wear protective gloves. To protect hands from chemicals, gloves should comply with Australia/New Zealand Standard AS/NZS 2161.
It is recommended that gloves are made of the following material: Chloroprene rubber. Nitrile rubber. Butyl rubber. Polyvinyl chloride (PVC).

Other skin and body protection

Provide eyewash station and safety shower. Wear suitable protective clothing to prevent skin contact.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn.
Wear a suitable dust mask.
Disposable filtering half mask respirators should comply with Australia/New Zealand Standard AS/NZS 1716.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Crystalline powder.
Colour	Yellow.
Odour	Sulphur.
Melting point	113°C
Initial boiling point and range	444°C
Flash point	>207.2°C Closed cup.

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Evaporation rate	Not applicable.
Flammability Limit - Lower(%)	Lower flammable/explosive limit: 35 g/m ³ Upper flammable/explosive limit: 1400 g/m ³
Vapour pressure	0.001 Pa @ 40°C Test method: OECD 104.
Relative density	2.07 g/cm ³ @ 20°C
Solubility(ies)	< 0.005 mg/l water @ 22°C Insoluble in water. Test method: OECD 105.
Auto-ignition temperature	232°C
Decomposition Temperature	Not applicable.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising. There are no chemical groups present in the product that are associated with oxidising properties.
Molecular weight	32.066
Volatile organic compound	Substance is inorganic

SECTION 10: Stability and reactivity

Reactivity	When damp, the product is corrosive to steel.
Stability	Stable under the prescribed storage conditions.
Possibility of hazardous reactions	Reactions with the following materials may cause explosions: Alkali metals. Ammonia. Strong oxidising agents. The following materials may react violently with the product: Bromine. Chlorine. Powdered metal.
Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight. Avoid generation and spreading of dust. Dust may form explosive mixture with air.
Materials to avoid	Strong oxidising agents. Ammonia. Alkali metals. Bromine. Chlorine. Powdered metal.
Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Sulphurous gases (SO _x). Hydrogen sulphide (H ₂ S).

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat
Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit
Based on available data the classification criteria are not met.

Acute toxicity - inhalation

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Notes (inhalation LC₅₀)	LC ₅₀ (4h) > 5.43 g/m ³ , Inhalation, Rat Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	Causes skin irritation.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not irritating. Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	- Guinea pig: Not sensitising. Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Chromosome aberration: Negative. Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Chromosome aberration: Negative. Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Data lacking.
IARC carcinogenicity	Not listed.
<u>Reproductive toxicity</u>	
Reproductive toxicity - development	Data lacking.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEL (90d) 1000 mg/kg/day, Oral, Rat Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.

SECTION 12: Ecological information

Toxicity	The product has poor water-solubility. Not toxic at limit of water solubility. Based on available data the classification criteria are not met.
<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	NOEC, 96 hours: > 5 µg/l, Brachydanio rerio (Zebra Fish) Not toxic at limit of water solubility.
Acute toxicity - aquatic invertebrates	NOEC, 48 hours: > 5 µg/l, Daphnia magna Not toxic at limit of water solubility.
<u>Persistence and degradability</u>	
Persistence and degradability	Not applicable. Substance is inorganic.
<u>Bioaccumulative potential</u>	
Bioaccumulative Potential	Not applicable.
<u>Mobility in soil</u>	
Mobility	The product has poor water-solubility.
<u>Other adverse effects</u>	

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Other adverse effects None known.

SECTION 13: Disposal considerations

Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

UN number

UN No. (ADG) 1350

UN No. (IMDG) 1350

UN No. (ICAO) 1350

UN proper shipping name

UN 1350 SULPHUR, 4.1, III, (E)

Proper shipping name (ADG) SULPHUR

Proper shipping name (IMDG) SULPHUR

Proper shipping name (ICAO) SULPHUR

Transport hazard class(es)

ADG class 4.1

ADG label 4.1

IMDG class 4.1

ICAO class/division 4.1

Transport labels



Packing group

ADG packing group III

IMDG packing group III

ICAO packing group III

Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

Special precautions for user

EmS F-A, S-G

Hazchem Code 1Z

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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SECTION 15: Regulatory information

Inventories

EU - EINECS/ELINCS

Present.

Canada - DSL/NDSL

Present.

US - TSCA

Present.

Australia - AICS

Present.

Korea - KECI

Present.

China - IECSC

Present.

Philippines - PICCS

Present.

New Zealand - NZIOC

Present.

SECTION 16: Any other relevant information

Key literature references and sources for data	European Chemicals Agency, http://echa.europa.eu/ - REACH disseminated dossier. Hazardous Substances Information System (HSIS), Safe Work Australia, 2015. International Chemical Safety Card, www.inchem.org .
Revision date	2/08/2018
Revision	6
Supersedes date	29/04/2016
Hazard statements in full	H315 Causes skin irritation.

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