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SAFETY DATA SHEET

Section 1: Identification

Product name:	Sulfur
Product use:	For laboratory research purposes.
Supplier:	Trace Sciences International 40 Vogell Rd Suite 42 Richmond Hill, ON L4B 3N6 CANADA
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Section 2: Hazard(s) Identification

2.1 GHS Classification
Skin irritation (Category 2), H315

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word	Warning
Hazard statement(s):	
H315	Causes skin irritation.
Precautionary statement(s):	
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Section 3: Composition/ Information on Ingredients

Formula : S
Molecular Weight : 32.07 g/mol

Material	CAS-No.	EC-No.	Index-No.	Concentration
Sulfur	7704-34-9	231-722-6	016-094-00-1	<=100%

Section 4: First-Aid Measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move person out of dangerous area if safe to do so.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water for at least 15 minutes. Use chemical shower if available. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contacts if possible.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5: Fire-Fighting Measures

5.1 Conditions of flammability
Not flammable or combustible.

5.2 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.3 Hazardous combustion products
Hazardous decomposition products formed under fire conditions: Sulphur oxides

5.4 Special protective equipment for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.5 Further information
No data available

Section 6: Accidental Release Measures

6.1 Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

Section 8: Exposure Controls/Personal Protection

8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Sulfur	7704-34-9	TWA	10 mg/m^3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

8.2 Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Impervious clothing, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Specific engineering controls
Use mechanical exhaust or laboratory fume hood to avoid exposure.

Section 9: Physical and Chemical Properties

Appearance

Form	Flakes
Colour	Light yellow

Safety Data

pH	No data available
Melting point/freezing point	117 - 120 °C (243 - 248 °F)
Boiling point	444.7 °C (832.5 °F)
Flash point	207 °C (405 °F) - closed cup
Flammability (solid, gas)	No data available
Ignition temperature	232 °C (450 °F)
Auto-ignition temperature	250 °C (482 °F)
Vapour pressure	10 hPa at 246 °C (475 °F), 1 hPa at 183.8 °C (362.8 °F)

Density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	Not applicable for inorganic substances
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available

Section 10: Stability and Reactivity

10.1 Chemical stability
Stable under recommended storage conditions

10.2 Possibility of hazardous reactions
Risk of explosion with:
Alkali metals, ammonia, barium, bromates, chlorates, barium nitrate, chlorites, calcium, hypochlorites, chlorine dioxide, chromium(VI) oxide, chlorine oxides, ether, iodates, potassium, nitrates, potassium permanganate, perchlorates, lithium, sodium, nitrites, peroxides, strong oxidizing agents, permanganates, phosphorus, mercury oxide, ammonium nitrate, magnesium (in powder form), zinc (in powder form)

Risk of ignition or formation of inflammable gases or vapours with:
Nitrides, powdered aluminium, carbides, chromates/perchromates, lead oxides, halogen-halogen compounds, phosphides, chromyl chloride, iron, alkaline earth metals, fluorine, indium, nickel, carbon disulfide, selenium, silver oxide, nitrogen dioxide, uranium, carbon

Exothermic reaction with:
Sulfides, boron, bromine, chlorine, halogens, copper, lithium silicide, powdered metals, organic nitro compounds, oxides of phosphorus, hydrogen, tin, cadmium (in powder form)

10.3 Conditions to avoid
Avoid moisture. Heat, flames and sparks.

10.4 Materials to avoid
Strong oxidizing agents. amines, bases

10.5 Hazardous decomposition products
See section 5

Section 11: Toxicological Information

Acute toxicity

Oral
LD50 Oral - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 401)

Inhalation
LC50 Inhalation - Rat - male and female - 4 h - > 5.43 mg/l
(OECD Test Guideline 403)

Dermal
LD50 Dermal - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 402)

Other information on acute toxicity
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Skin irritation
(OECD Test Guideline 404

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization
in vivo assay - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard
No data available

Signs and Symptoms of Exposure
Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting, dermatitis

Additional Information
RTECS: WS4250000

Section 12: Ecological Information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available

Section 13: Disposal Considerations

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

Section 14: Transport Information

IATA

UN number:	UN1350	Class:	4.1	Packing group:	III
Proper shipping name:	Sulphur				

Section 15: Regulatory Information

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

Further information
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for his or her particular purpose(s).

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