

# Safety Data Sheet

## Sulfur, Powder

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1

#### Product Description

**Product Name:** Sulfur, Powder  
**Recommended Use:** Science education applications  
**Synonyms:** Sulphur, Brimstone  
**Distributor:** Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215-3398  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2

#### Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

## WARNING



Causes skin irritation.

**GHS Classification:**  
Skin Corrosion/Irritation Category 2

### Section 3

#### Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Sulfur, Powder	7704-34-9	100

### Section 4

#### First Aid Measures

##### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5

#### Firefighting Procedures

**Extinguishing Media:** Water fog in flooding quantities. Apply water from as far a distance as possible.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Avoid Dusting. May become explosive when dispersed in air. Water sprayed onto burning material may cause frothing and splattering of burning liquid with possible injury of firefighting personnel. Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Sulfur containing gases

### Section 6

#### Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Avoid dusting.

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Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

## Section 7 Handling and Storage

**Handling:** Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid creating and inhaling dust.

**Storage:** Keep container tightly closed in a cool, well-ventilated place.

**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
Sulfur	N/A	N/A	N/A	N/A

### Control Parameters

**Engineering Measures:** No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section 11. A respirator is not normally required.

**Respirator Type(s):** None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.

**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

**Gloves:** No information available

## Section 9 Physical Data

<b>Formula:</b> S8	<b>Vapor Pressure:</b> 1.3 hPa at 20°C
<b>Molecular Weight:</b> 32.07	<b>Evaporation Rate (BuAc=1):</b> No data available
<b>Appearance:</b> Yellow Powder	<b>Vapor Density (Air=1):</b> No data available
<b>Odor:</b> Moderate Rotten-Egg Odor	<b>Specific Gravity:</b> 2.07 @ 25°C
<b>Odor Threshold:</b> No data available	<b>Solubility in Water:</b> Practically Insoluble
<b>pH:</b> No data available	<b>Log Pow (calculated):</b> No data available
<b>Melting Point:</b> 107 C	<b>Autoignition Temperature:</b> 232 C
<b>Boiling Point:</b> 444 - 447 C	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> 207 C	<b>Viscosity:</b> No data available
<b>Flammable Limits in Air:</b> 35 - 1400 g/m3	<b>Percent Volatile by Volume:</b> No data available

## Section 10 Reactivity Data

**Reactivity:** Mildly reactive - See below

**Chemical Stability:** Stable under normal conditions.

**Conditions to Avoid:** Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.

**Incompatible Materials:** Ammonia, Strong oxidizing agents, Charcoal

**Hazardous Decomposition Products:** Sulfur containing gases

**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation, ingestion, eye or skin contact.

**Symptoms (Acute):** Dermatitis, Respiratory Irritation, Metabolic Acidosis, Allergies, Eye disorders

**Delayed Effects:** No data available

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**Acute Toxicity:**  
**Chemical Name**  
Sulfur, Powder

**CAS Number**  
7704-34-9

**Oral LD50**  
Oral LD50 Rat >  
3000 mg/kg

**Dermal LD50**  
Dermal LD50  
Rabbit > 2000  
mg/kg

**Inhalation LC50**  
INHALATION  
LC50-4H Rat >  
9.23 MG/L

**Carcinogenicity:**  
**Chemical Name**  
Sulfur

**CAS Number**  
7704-34-9

**IARC**  
Not listed

**NTP**  
Not listed

**OSHA**  
Not listed

**Chronic Effects:**

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** No data available  
**Chronic:** No data available

## Section 12

## Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** Chemically Transformed  
**Bioaccumulation:** No data  
**Degradability:** Naturally occurring element. Does not biodegrade.  
**Other Adverse Effects:** No data

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**Eco Toxicity**  
96 HR LC50 BRACHYDANIO RERIO 866 MG/L [STATIC]  
96 HR LC50 LEPOMIS MACROCHIRUS < 14 MG/L [STATIC]  
96 HR LC50 ONCORHYNCHUS MYKISS > 180 MG/L [STATIC]

## Section 13

## Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14

## Transport Information

**Ground - DOT Proper Shipping Name:**  
NA1350  
Sulfur  
Class 9  
P.G. III  
\*Non-bulk quantities are exempt\*

**Air - IATA Proper Shipping Name:**  
UN1350  
Sulfur  
Division 4.1  
Class III

## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Sulfur	7704-34-9	No	No	No	No	No

## Section 16

## Additional Information

**Revised:** 04/30/2013

**Replaces:** None

**Printed:** 06-21-2013

# Safety Data Sheet

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

## Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health