

# 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  
1-800-227-1150  
**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. Harmful if inhaled.

**GHS Classification:**

Skin Corrosion/Irritation Category 2, Acute Toxicity - Inhalation Dust / Mist Category 4

|                                       |                                                                    |
|---------------------------------------|--------------------------------------------------------------------|
| <b>Acute Toxicity Oral Contains</b>   | 100 % of the mixture consists of ingredient(s) of unknown toxicity |
| <b>Acute Toxicity Dermal Contains</b> | 100 % of the mixture consists of ingredient(s) of unknown toxicity |

### 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:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**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

# Safety Data Sheet

## 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. 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:** Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. 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

**Formula:** S8  
**Molecular Weight:** 32.07  
**Appearance:** Yellow Powder  
**Odor:** Moderate Rotten-Egg Odor  
**Odor Threshold:** No data available  
**pH:** No data available  
**Melting Point:** 107 C  
**Boiling Point:** 444 - 447 C  
**Flash Point:** 207 C  
**Flammable Limits in Air:** 35 - 1400 g/m3

**Vapor Pressure:** 1.3 hPa at 20°C  
**Evaporation Rate (BuAc=1):** No data available  
**Vapor Density (Air=1):** No data available  
**Specific Gravity:** 2.07 @ 25°C  
**Solubility in Water:** Practically Insoluble  
**Log Pow (calculated):** No data available  
**Autoignition Temperature:** 232 C  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** 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

# Safety Data Sheet

## 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

### Acute Toxicity:

**Chemical Name**  
Sulfur, Powder

**CAS Number**  
7704-34-9

**Oral LD50**  
Not determined

**Dermal LD50**  
Not determined

**Inhalation LC50**  
INHALATION  
LC50 MAMMAL  
1660 MG/M3

### 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

**Chemical Name**  
Sulfur, Powder

**CAS Number**  
7704-34-9

**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            |

# Safety Data Sheet

## Section 16

## Additional Information

Revised: 08/26/2014

Replaces: 08/26/2014

Printed: 04-21-2015

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      |