

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name            Sulfur Powder  
CAS number             7704-34-9  
Synonyms                Sulphur; Brimstone

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

Identified uses            Laboratory chemicals.

#### 1.3 Details of the supplier of the safety data sheet

Company                    Lab Alley, LLC  
                                    12501 Pauls Valley Road  
                                    Austin, Texas 78737  
                                    U.S.A.  
  
Telephone                 512-668-9918  
Fax                            512-886-4008

#### 1.4 Emergency telephone

Emergency Phone #        US & Canada: 1-800-535-5053            INFOTRAC  
                                    International 1-352-323-3500            INFOTRAC

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

|                                   |            |
|-----------------------------------|------------|
| Skin Corrosion/Irritation         | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Combustible dust                  | Yes        |

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

May form combustible dust concentrations in air.  
Causes skin irritation.  
Causes serious eye irritation.

Precautionary statements

Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage: Store in a well-ventilated place. Keep container tightly closed.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

| Chemical name | Common name and synonyms | CAS number | Concentration |
|---------------|--------------------------|------------|---------------|
| Sulfur        | Sulphur; Brimstone       | 7704-34-9  | <=100%        |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

#### If inhaled

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

#### In case of skin contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**In case of eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**If swallowed** Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

#### 4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

#### 4.3 Indication of any immediate medical attention and special treatment needed

If symptoms persist, call a physician. Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Water mist may be used to cool closed containers.

**Unsuitable extinguishing media** No information available.

#### 5.2 Specific hazards arising from the substance or mixture

Flammable. Containers may explode when heated. Dust can form an explosive mixture with air. Fine dust dispersed in air may ignite.

Hazardous Combustion Products: Sulfur oxides.

#### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 5.4 Further information

**Flash Point** 207.2 °C / 405 °F

**Autoignition Temperature** 240 °C / 464 °F

##### Explosion limits

**Upper** 6.38% (v)

**Lower** 0.17% (v)

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge**

No information available.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 2      | 1            | 0           | N/A              |

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Avoid dust formation. Ensure adequate ventilation.

### 6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal.

### 6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions on safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation. Ensure adequate ventilation.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place. Flammables area. Keep away from heat, sparks, and flame.

#### Incompatibilities

Strong oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure limits

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

## 8.2 Exposure controls

### Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

### Personal protective equipment

#### Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN 143.

#### Control of environmental exposure

Follow best practice for site management and disposal of waste. Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                 |  |
|---------------------------------|--|
| Physical State                  | Solid powder                           |
| Appearance                      | Yellow                                 |
| Odor                            | Odorless, or faint odor of rotten eggs |
| Odor Threshold                  | No information available               |
| pH                              | No information available               |
| Melting Point/Range             | 118 - 120°C (244-248°F)                |
| Boiling Point/Range             | 832°F (444°C)                          |
| Evaporation Rate                | Not applicable                         |
| Flammability (solid)            |  |
| Flammability or explosive limit |  |
| Upper                           | 6.38% (v)                              |

|   |                          |
|---|--------------------------|
| Lower                                     | 0.17% (v)                |
| Vapor Pressure                            | 8 mmHg at 246°C (475°F)  |
| Vapor Density                             | Not applicable           |
| Density                                   | 33-80 lbs. / ft3 (bulk)  |
| Solubility                                | Insoluble in water       |
| Partition coefficient;<br>n-octanol/water | No data available        |
| Autoignition Temp                         | 240°C (464°F)            |
| Decomposition Temp                        | Doesn't decompose        |
| Viscosity                                 | Not applicable           |
| Molecular Formula                         | S                        |
| Molecular Weight                          | 32.06 g/mol              |
| VOC Content(%)                            | No information available |
| Oxidizing properties                      | No information available |

## 9.2 Other safety information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

None under normal processing.

### 10.4 Conditions to avoid

Incompatible products. Excess heat. Avoid dust formation. Keep away from open flames, hot surfaces, and sources of ignition.

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

Sulfur oxides.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

#### Acute toxicity

| Component | LD50 Oral         | LD50 Dermal          | LC50 Inhalation     |
|-----------|-------------------|----------------------|---------------------|
| Sulfur    | >3000 mg/kg (Rat) | >2000 mg/kg (Rabbit) | >9.23 mg/L (Rat) 4h |

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**Skin corrosion/irritation**

Irritating to skin.

**Serious eye damage/eye irritation**

Irritating to eyes.

**Respiratory or skin sensitization**

Irritating to respiratory system.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

| Component | CAS       | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-----------|-----------|------------|------------|------------|------------|------------|
| Sulfur    | 7704-34-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Specific target organ toxicity - single exposure**

None known.

**Specific target organ toxicity - repeated exposure**

None known.

**Reproductive toxicity**

No information available.

**Chronic effects**

No information available.

**11.2 Additional Information**

The toxicological properties have not been fully investigated.

**SECTION 12: Ecological information****12.1 Toxicity**

Harmful to aquatic organisms.

| Product |      | Species             | Test Results  |
|---------|------|---------------------|---------------|
| Sulfur  | LC50 | Oncorhynchus mykiss | >180 mg/L/96h |
|         | EC50 | Water Flea          | >5 g/L/48h    |

**12.2 Persistence and degradability**

Insoluble in water.

**12.3 Bio accumulative potential**

No information available.

#### 12.4 Mobility in soil

Is not likely mobile in the environment due its low water solubility.

#### 12.5 Results of PBT and vPvB assessment

No information available.

#### 12.6 Endocrine disrupting properties

No information available.

#### 12.7 Other adverse effects

No information available.

### SECTION 13: Disposal considerations

#### 13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### SECTION 14: Transport information

#### DOT (US)

|                      |         |
|----------------------|---------|
| UN-no                | UN1350  |
| Proper Shipping Name | SULPHUR |
| Hazard Class         | 4.1     |
| Packing Group        | III     |

#### IMDG

|                      |         |
|----------------------|---------|
| UN-no                | UN1350  |
| Proper Shipping Name | SULPHUR |
| Hazard Class         | 4.1     |
| Packing Group        | III     |

#### IATA

|                      |         |
|----------------------|---------|
| UN-no                | UN1350  |
| Proper Shipping Name | SULPHUR |
| Hazard Class         | 4.1     |
| Packing Group        | III     |

### SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.



**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

See Section 2 for more information.

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Not listed.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Listed, Sulfur (CAS #7704-34-9).

**US. New Jersey Worker and Community Right-to-Know Act**

Listed, Sulfur (CAS #7704-34-9).

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed, Sulfur (CAS #7704-34-9).

**California Proposition 65**

Not listed.

## **SECTION 16: Other information**

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## **SECTION 17: Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.