

# Safety Data Sheet



## 1: Identification

### 1.1: Product Identifier

Product Name: S

Product Number(s): 1S-0002F

CAS Number: 7704-34-9

SDS Document Number: 000244

### 1.2: Recommended Uses and Restrictions

Recommended Uses

Manufacture of substances

Restrictions

Not for food or drug use.

### 1.3: Supplier Contact Information

APL Engineered Materials, Inc.

2401 N. Willow Rd.

Urbana, IL 61802

Phone: 217-367-1340

Fax: 217-367-9084

### 1.4: Emergency Phone Number

International: +01-813-248-0585

United States: 800-255-3924

## 2: Hazards Identification

### 2.1: Classifications

Skin Corrosion/Irritation - Category 2

### 2.2: GHS Label Elements

Pictograms



Signal Word: Warning

Hazard Statements

H315: Causes skin irritation.

Precautionary Statements

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves.

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 and wash before reuse.

### 2.3: Hazards Not Otherwise Classified or Not Covered by GHS

Combustible dust

### 2.4: Amount(s) of substances with unknown toxicity

None

## 3: Composition/Information on Ingredients

3.1: .Ingredient	.Weight%	.Formula	.CAS Number	.Mol Wt	.EC Number
S	100	S	7704-34-9	32.06	

### 3.2: Other Hazardous components

none

### 3.3: Trade Secret Disclaimer

none

### 3.4: Synonyms

Sulfur

## 4: First Aid Measures

### 4.1: First Aid

#### General

Consult with physician and provide this Safety Data Sheet

Remove person from area of exposure and remove any contaminated clothing

#### In contact with eyes

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Seek medical attention if irritation develops or persists

#### In contact with skin

Wash thoroughly with soap and plenty of water. Remove all contaminated clothing for proper laundering. Seek medical attention if irritation develops or persists.

#### If swallowed

If conscious and alert, rinse mouth and drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical aid.

#### If inhaled

Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.

If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

### 4.2: Most important symptoms and effects; acute and delayed

No data available.

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

no data available

## 5: Fire Fighting Measures

### 5.1: Fire extinguishing media

water or alcohol-resistant foam  
carbon dioxide  
dry chemical

5.2: Specific hazards arising from the substance or mixture  
sulfur oxides

5.3: Special protective equipment and precautions for firefighters.  
Wear self contained breathing apparatus for fire fighting if necessary

## **6: Accidental Release Measures**

6.1: Personal precautions, protective equipment, and emergency procedures.

For personal protection see section 8.  
Ensure adequate ventilation.  
Use personal protective equipment.  
Evacuate personnel to safe areas.  
Avoid dust formation.  
Avoid breathing dust.

6.2: Methods and materials for containment and cleaning up.

Sweep up and shovel.  
Keep in suitable, closed containers for disposal.

6.3: Environmental precautions

Do not let product enter drains.

6.4: Disposal

Dispose of in accordance with local regulations.  
See section 13.

## **7: Handling and Storage**

7.1: Precautions for safe handling

Avoid formation of dust and aerosols.  
See precautionary statements in section 2.2.  
Mechanical processing of this product can result in the release of combustible dust.  
Provide appropriate exhaust ventilation at places where dust is formed.  
Avoid contact with skin and eyes.

7.2: Conditions for safe storage

Store away from moisture.  
Keep container tightly closed.  
Store in a dry and well-ventilated place.

7.3: Incompatibilities

strong oxidizing agents  
amines  
bases

## 8: Exposure Controls/Personal Protection

### 8.1: Control parameters

OSHA permissible exposure limit (PEL)

not listed

ACGIH threshold limit value (TLV)

not listed

NIOSH recommended exposure limit (REL)

not listed

### 8.2: Engineering controls

Use adequate ventilation to keep airborne concentrations low

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower

### 8.3: Personal protective equipment

Eyes

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

Wear appropriate, chemical-resistant protective gloves to prevent skin exposure.

Clothing

Wear appropriate protective clothing to prevent skin exposure

Respirator

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.  
Always use a NIOSH or European Standard EN 149 approved respirator when necessary

## 9: Physical and Chemical Properties

### 9.a: Appearance

State: Solid

Form: Powder or Spheres

Color: Light yellow

### 9.b: Odor: slight

### 9.c: Odor threshold: no data available

### 9.d: pH: no data available

### 9.e: Melting point / freezing point: 118 - 120 °C (244 - 248 °F)

### 9.f: Initial boiling point and range: 444.7 °C (832.5 °F)

### 9.g: Flashpoint: 207 °C (405 °F)- closed cup

### 9.h: Evaporation rate: no data available

### 9.i: Flammability (solid, gas): may form combustible dust in air

### 9.j: Upper/lower flammability or explosive limits: Upper- 6.83% (V) Lower- 0.17% (V)

### 9.k: Vapor pressure: 10 hPa (8 mmHg) at 246 °C (475 °F)

### 9.l: Vapor density: no data available

### 9.m: Relative density: 2.07 g/mL at 25 °C (77 °F)

- 9.n: Water Solubility: insoluble  
9.o: Partition coefficient: n-octanol/water: no data available  
9.p: Auto-ignition temperature: 240 °C (464 °F)  
9.q: Decomposition temperature: no data available  
9.r: Viscosity: 8 mm<sup>2</sup>/s at 140 °C (284 °F)

## 10: Stability and Reactivity

### 10.1: Reactivity

no data available

### 10.2: Chemical stability

Stable under recommended storage conditions.

### 10.3: Possibility of hazardous reactions

no data available

### 10.4: Conditions to avoid

exposure to water

heat

### 10.5: Incompatible materials

See section 7.3.

### 10.6: Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5.2

## 11: Toxicological Information

### 11.1: Toxicity data

Acute toxicity - Oral

LD50 Oral - rat - >2,000 mg/kg

Acute toxicity - Dermal

LD50 Dermal - rabbit - >2,000 mg/kg.

Acute toxicity - Inhalation

LC50 Inhalation - rat - 4 hrs >5.41 mg/kg

Skin corrosion/irritation

Not corrosive / irritant.

Eye damage/irritation

Non-irritating.

Respiratory irritation

No data available.

Germ cell mutagenicity

no data available

Reproductive toxicity

no data available

Specific organ toxicity - single exposure

No data available.

Specific organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

RTECS: WS4250000

ACGIH carcinogenicity

The ACGIH has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

IARC carcinogenicity

The IARC has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

NTP carcinogenicity

The NTP has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

OSHA carcinogenicity

OSHA has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

#### 11.2: Routes of exposure

See section 2.2

#### 11.3: Symptoms of exposure

See section 4.2

#### 11.4: Delayed and immediate effects of exposure

To the best of our knowledge the toxicological properties have not been thoroughly investigated.

## 12: Ecological Information

#### 12.1: Ecotoxicity

Toxicity to fish

LC50-Oncorhynchus mykiss (rainbow trout) > 180 mg/l- 96 h

Toxicity to daphnia and other aquatic invertebrates

> 5,000 mg/l - 48 h

Toxicity to algae/bacteria

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: Other effects

no data available

## 13: Disposal Considerations

### 13.1: Waste treatment methods

No data available

### 13.2: Safe handling

See section 7.1 .

### 13.3: Product disposal

Contact a licensed professional waste disposal service to dispose of this material.

### 13.4: Packaging disposal

Dispose of as unused product.

## 14: Transport Information

### 14.1: DOT(US)

UN Number: 1350

Proper Shipping Name: Sulfur

Shipping Class(es): 4.1

Marine Pollutant: No

### 14.2: IMDG

UN Number: 1350

Proper Shipping Name: Sulphur

Packing Group: III

Shipping Class(es): 4.1

Marine Pollutant: No

### 14.3: IATA

UN Number: 1350

Proper Shipping Name: Sulphur

Packing Group: III

Shipping Class(es): 4.1

### 14.4: Special Shipping Precautions

None

## 15: Regulatory Information

### 15.1: TSCA inventory

This material is listed on the TSCA inventory.

### 15.2: SARA 302 components

This material is not subject to the reporting requirements of SARA Title III, Section 302.

### 15.3: SARA 313 components

This material is not subject to the reporting requirements of SARA Title III, Section 313.

### 15.4: SARA 313/312 hazards

No SARA hazards.

#### 15.5: Other information

Massachusetts Right To Know Components - This product does not contain materials listed on the Massachusetts Right to Know list

New Jersey Right To Know Components -This product contains materials listed on the New Jersey Right to Know list

Pennsylvania Right To Know Components -This product contains materials listed on the Pennsylvania Right to Know list

California Prop. 65 Components - This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### **16: Additional Information**

#### 16.1: NFPA

Health: 2

Fire: 1

Reactivity: 2

Special:

#### 16.2: HMIS

Health: 2

Chronic:

Flammability: 2

Physical Hazard: 2

#### 16.3: Disclaimers

For industrial use only. Not for drug, household or other uses

The information herein is believed to be accurate and reliable as of the date compiled. However, APL Engineered Materials, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.

#### 16.4: References

Information contained on this SDS sheet was obtained from some or all of the following sources: American Conference of Governmental Industrial Hygienists (ACGIH), TLVs and BEIs; National Institute for Occupational Safety and Health (NIOSH), Pocket Guide to Chemical Hazards; European Chemicals Agency, <http://echa.europa.eu/>; The National Institute of Health, U.S National Library of Medicine, TOXNET, Toxicology Data Network; and the Registry of Toxic Effects of Chemical Substances (RTECS) database.

#### 16.5: Version

Preparation Date: 5/22/2015

Revision Date: 5/22/2015

Version Number: GHS 1.0