



# SAFETY DATA SHEET

Revision Date 30-Oct-2015

Version 1

## 1. IDENTIFICATION

**Product Name** Sulfur  
**Product Code** 9361  
**CAS No.** 7704-34-9  
**Chemical Formula** S  
**Recommended Use** For laboratory, scientific, R&D or manufacturing use.  
**Company** E K Industries, Inc.  
1403 Herkimer St.  
Joliet, IL 60432  
Tel. (800) 283-4244  
**Emergency Telephone** Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Flammable solids	Category 2

### Label elements

#### **Signal word**

Warning

#### **Hazard statements**

Causes skin irritation.  
Flammable solid.



#### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment.

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.

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.

**Precautionary Statements - Storage**

Store in accordance with local regulations.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Sulfur	7704-34-9	>98

### 4. FIRST AID MEASURES

**Description of first aid measures**

<b>Eye contact</b>	Flush eyes with plenty of water, removing contact lenses if present. Get medical attention if irritation develops.
<b>Skin contact</b>	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. Get medical attention for any breathing difficulty.
<b>Ingestion</b>	Rinse mouth and drink several glasses of water. Contact a physician or poison control center if symptoms develop.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause skin irritation.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Flammable. Dusts or fumes may form explosive mixtures in air.

**Hazardous combustion products**

Sulphur oxides. Hydrogen sulfide.

**Protective equipment and precautions for firefighters**

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

**NFPA**

Health hazards 2

Flammability 1

Instability 0

Physical and Chemical  
Properties -

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Avoid creating dust. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Avoid creating dust. Pick up and transfer to properly labeled containers. Ground and bond containers when transferring material.

## 7. HANDLING AND STORAGE

**Precautions for safe handling** Use personal protective equipment as required  
Handle in accordance with good industrial hygiene and safety practice.

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

**Incompatible materials** Strong oxidizing agents. Amines. Bases.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

**Engineering Controls** Emergency showers, eyewash stations, ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<b>Physical state</b>	Solid
<b>Appearance</b>	light yellow, flakes
<b>Odor</b>	slight, characteristic
<b>Odor threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting point / freezing point</b>	115 C - 118 C
<b>Boiling point / boiling range</b>	444.7 C
<b>Flash point</b>	207 C
<b>Evaporation rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	46
<b>Lower flammability limit:</b>	3.3

Vapor pressure	No information available
Vapor density	No information available
Relative density	2.07
Water solubility	Insoluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	235 C - 240 C
Decomposition temperature	No information available
Kinematic viscosity	No information available

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight. Dust formation. Sources of ignition.
<b>Incompatible materials</b>	Strong oxidizing agents. Amines. Bases.
<b>Hazardous Decomposition Products</b>	Sulphur oxides. Hydrogen sulfide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation</b>	No data available.
<b>Eye contact</b>	No data available.
<b>Skin contact</b>	Irritating to skin.
<b>Ingestion</b>	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfur 7704-34-9	> 3000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 9.23 mg/L ( Rat ) 4 h

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	Irritating to skin. May cause eye irritation.
<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	This chemical does not contain any carcinogens or potential carcinogens as listed by ACGIH, OSHA, IARC or NTP

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Sulfur 7704-34-9	-	866: 96 h Brachydanio rerio mg/L LC50 static 14: 96 h Lepomis macrochirus mg/L LC50 static 180: 96 h Oncorhynchus mykiss mg/L LC50 static	-

### Persistence and degradability

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods****Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

### 14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

**DOT**

<b>UN/ID no.</b>	1350
<b>Proper shipping name</b>	Sulfur
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III

**IATA**

<b>UN/ID no.</b>	1350
<b>Proper shipping name</b>	Sulfur
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III

### 15. REGULATORY INFORMATION

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	Yes
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals

#### U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sulfur 7704-34-9	X	X	X

## 16. OTHER INFORMATION

**Prepared By** EKI Regulatory Affairs (Email: reg@eki-chem.com)  
**Revision Date** 30-Oct-2015

#### Disclaimer

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**End of Safety Data Sheet**