

Section 1 Chemical Product and Company Identification

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For laboratory and industrial use only.
Not for drug, food or household use.

Product SULFUR

Synonyms Sulfur Flowers ; Sulfur Flour

Section 2 Hazards Identification

Signal word: WARNING

Pictograms: GHS07

Target organs: None known



GHS Classification:

Skin irritation (Category 2)

GHS Label information: Hazard statement:

H315: Causes skin irritation.

Precautionary statement:

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P332+P313: If skin irritation occurs: Get medical attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Combustible dust

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Sulfur	7704-34-9	100%	231-722-6

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Finely dispersed particles form explosive mixtures in air.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Sulfur	None established	None established	None established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid yellow powder or lumps.	Evaporation rate (= 1): Not applicable	Partition coefficient: Data not available
Odor: Odor of rotten eggs	Flammability (solid/gas): Data not available.	Auto-ignition temperature: 248°C (478°F)
Odor threshold: Data not available.	Explosion limits: Lower / Upper: 3.3% / 46.0%	Decomposition temperature: Data not available.
pH: Data not available.	Vapor pressure (mm Hg): 0 @ 138°C (280°F)	Viscosity: Data not available.
Melting / Freezing point: 116-121°C (242-251°F)	Vapor density (Air = 1): Data not available	Molecular formula: S
Boiling point: 444°C (831°F)	Relative density (Specific gravity): 2.04-2.07 @ 21°C (670°F)	Molecular weight: 32.06
Flash point: 207°C (405°F) Closed Cup	Solubility(ies): Insoluble in water.	

Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.
Incompatible materials: Reacts violently with strong oxidizing agents. Corrosive to copper and copper alloys. Damp sulfur will corrode steel.
Hazardous decomposition products: Sulfur dioxide.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: >5000 mg/kg ; Inhalation-rat LC50: 0.067 mg/L/4hours ; Dermal-rabbit LD50: >2000 mg/kg
Skin corrosion/irritation: Skin-rabbit - Irritant.
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenicity: Data not available
 NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
 IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
 OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
 Inhalation: Burning sensation, cough, sore throat. May cause inflammation of the the nose and respiratory tract.
 Ingestion: Burning sensation, diarrhea.
 Skin: Redness. Prolonged or repeated contact may cause dermatitis.
 Eyes: Redness, pain, blurred vision.
Signs and symptoms of exposure: See Potential health effects above.
Additional information: RTECS #: WS4250000

Section 12 Ecological Information

Toxicity to fish: Brachydanio rerio (fish, fresh water), LC50 = 866 mg/L/96 hours
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = >10,000 mg/L/24 hours
Toxicity to algae: No data available
Persistence and degradability: No data available **Bioaccumulative potential:** No data available
Mobility in soil: No data available **PBT and vPvB assessment:** No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

Domestic:		IMO (International Maritime Organization):	
UN/NA number: NA1350	Shipping name: Sulfur	UN/NA number: UN1350	Shipping name: Sulphur
Hazard class: 9	Packing group: III	Hazard class: 4.1	Packing group: III
Exceptions: No exceptions	2016 ERG Guide # 133	Exceptions: Ltd Qty ≤ 5kg	2016 ERG Guide # 133
Reportable Quantity: No	Marine pollutant: No	Reportable Quantity: No	Marine pollutant: No

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA Listed	CERCLA (RQ) Not listed	RCRA code Not listed	DSL Listed	NDSL Not listed	CA Prop 65
Sulfur	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.