



SECTION 1: Identification of the substance/mixture

1.1. Product identifier

Product form	: Substance
Substance name	: Sulfur
Formula	: S
Molecular weight	: 32.07 g/mol
CAS No.	: 7704-34-9
Product code	: LW-S
Synonyms	: sulphur

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

Use of the substance/mixture	: Laboratory chemicals, Manufacture of substances
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1.3. Emergency telephone number

Emergency number	: 1.800.424.9300 (USA) +1.703.527.3887 (INT)
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SECTION 2: Hazards Identification


2.1. Classification of the substance or mixture

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

Skin irritation (Category 2), H315

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. GHS Label elements, including precautionary statements

Pictogram	: 
Signal word	: Warning
Hazard statement(s)	: Harmful if swallowed.
H302	: Causes skin irritation.
Precautionary statement(s)	
P264	: Wash skin thoroughly after handling.
P280	: Wear protective gloves.
P302 + P352	: IF ON SKIN: Wash with plenty of soap and water.
P321	: Specific treatment (see supplemental first aid instructions on this label).
P332 + P313	: If skin irritation occurs: Get medical advice/ attention.

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P362 : Take off contaminated clothing and wash before reuse.

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

Combustible dust

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components

Component	Classification	Concentration
Sulfur	Skin Irrit. 2; H315	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: Description of first aid measures

4.1. Description of first aid measures

General advice : Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

First-aid measures after inhalation : If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

First-aid measures after skin contact : Wash off with soap and plenty of water. Consult a physician.

First-aid measures after eye contact : Flush eyes with water as a precaution.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Sulphur oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

5.4. More Information

No data available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

8.3. Personal protective equipment

- Eye protection : Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin Protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
- Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
- Body protection : Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Respiratory protection : For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
- Environmental exposure controls : Do not let product enter drains.

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Form: powder Color: yellow
Odor	: slight
Odor Threshold	: No data available
pH	: No data available
Melting point/freezing point	: Melting point/range: 118 - 120 °C (244 - 248 °F)
Initial boiling point and boiling range	: 444.7 °C (832.5 °F)
Flash point	: 207 °C (405 °F) - closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: May form combustible dust concentrations in air
Upper/lower flammability or explosive limits	: Upper explosion limit: 6.83 %(V) Lower explosion limit: 0.17 %(V)
Vapor pressure	: 10 hPa (8 mmHg) at 246 °C (475 °F) 1 hPa (1 mmHg) at 183.8 °C (362.8 °F)
Vapor density	: No data available
Relative density	: 2.07 g/cm ³ at 25 °C (77 °F)
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: 240 °C (464 °F)
Decomposition temperature	: No data available
Viscosity	: 8 mm ² /s at 140 °C (284 °F) -
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No data available

SECTION 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

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

No data available

10.4. Conditions to avoid

Avoid moisture. Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agents Amines, Bases

10.6. Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : LDLO Oral - Rabbit - 175 mg/kg
LD50 Oral - Rat - > 2,000 mg/kg
LC50 Inhalation - Rat - 4 h - > 9.23 mg/l
LD50 Dermal - Rabbit - > 2,000 mg/kg
LDLO Intravenous - Rat - 8 mg/kg
LDLO Intravenous - Rabbit - 5 mg/kg
LDLO Intraperitoneal - Guinea pig - 55 mg/kg
LDLO Intravenous - Dog - 10 mg/kg

Skin corrosion/irritation : Skin - Rabbit
Result: No skin irritation

Serious eye damage/irritation : Eyes - Rabbit
Result: No eye irritation

Respiratory or skin sensitization : No data available

Germ cell mutagenicity : No data available

Carcinogenicity

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.

ACGIH: : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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.

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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	:	No data available
Specific target organ toxicity (single exposure)	:	No data available
Specific target organ toxicity (repeated exposure)	:	No data available
Aspiration hazard	:	No data available
Additional Information	:	RTECS: Not available Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting., Dermatitis To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish	:	LC50 - Oncorhynchus mykiss (rainbow trout) - > 180 mg/l - 96 h LC50 - other fish - 866 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 - Daphnia magna (Water flea) - > 5,000 mg/l - 48 h

12.2. Persistence and degradability : No data available

12.3. Bioaccumulative potential : No data available

12.3. Mobility in soil : No data available

12.4. Results of PBT and vPvB assessment : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6. Other adverse effects : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated Packaging	:	Dispose of as unused product.

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 14: Transport information

DOT (US)

UN number : 1350
Class : 9
Packing group : III
Proper shipping name : Sulfur
Reportable Quantity (RQ) :
Poison Inhalation Hazard : No

IMDG

UN number : 1350
Class : 4.1
Packing group : III
EMS-No F-A, S-G
Proper shipping name : SULPHUR

IATA

UN number : 1350
Class : 4.1
Packing group : III
Proper shipping name : SULPHUR

SECTION 15: Regulatory information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components

Sulfur	CAS-No.	Revision Date
	7704-34-9	1993-04-24

Pennsylvania Right To Know Components

Sulfur	CAS-No.	Revision Date
	7704-34-9	1993-04-24

New Jersey Right To Know Components

Sulfur	CAS-No.	Revision Date
	7704-34-9	1993-04-24

Sulfur

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H315 : Causes skin irritation.

Skin Irrit. : Skin irritation

HMIS Rating

Health Hazard : 2

Chronic Health Hazard : *

Flammability : 2

Physical Hazard : 2

NFPA Rating

Health hazard : 2

Fire Hazard : 1

Reactivity Hazard : 2

Further Information

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Loudwolf Holdings Ltd. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his/her application.