



Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 09.12.2024

Version number 4.00 (replaces version 3.00)

Revision: 09.12.2024

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Sulfur
- **Article number:** 2654
- **CAS Number:**
7704-34-9
- **EC number:**
231-722-6
- **Index number:**
016-094-00-1
- **Registration number** The substance is exempt from REACH-registration.
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Ingredient for pharmaceutical drugs
- **Uses advised against** No relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
CAELO
Caesar & Loretz GmbH
Herderstr. 31
D-40721 Hilden
GERMANY
- **Further information obtainable from:**
E-mail: info@caelo.de
Tel.: +49210349940 (during regular opening hours)
- **Emergency telephone number:**
Poison Information Center Bonn
Venusberg-Campus 1, 53127 Bonn
Tel: +49 (0) 228-192400

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Skin Irrit. 2 H315 Causes skin irritation.
- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07



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- **Signal word** Warning
 - **Hazard statements**
H315 Causes skin irritation.
 - **Precautionary statements**
P264 Wash thoroughly after handling.
P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
 - **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **Determination of endocrine-disrupting properties** Not applicable.
-

3 Composition/information on ingredients

- **Substances**
 - **CAS No. Description**
CAS: 7704-34-9 sulfur
 - **Identification number(s)**
 - **EC number:** 231-722-6
 - **Index number:** 016-094-00-1
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4 First aid measures

- **Description of first aid measures**
 - **After inhalation:**
Bring the person out of the contaminated area to fresh air.
Use a respiratory bag or breathing device.
Seek immediate medical advice.
 - **After skin contact:** Generally the product does not irritate the skin.
 - **After eye contact:** Rinse the opened eye for several minutes under running water.
 - **After swallowing:**
Rinse mouth with plenty of water.
Do not induce vomiting; call for medical help immediately.
Show product-label or this MSDS.
 - **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.
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5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
All regular extinguishing media can be used.
Use fire extinguishing methods suitable to surrounding conditions.

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- **Special hazards arising from the substance or mixture**
Combustible but not oxidising. In case of fire dangerous vapours/gases can be generated:
Sulfur oxide (SxOy)
 - **Advice for firefighters**
 - **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.
 - **Additional information**
Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.
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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Wear protective clothing.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Keep away from ignition sources.
 - **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
 - **Methods and material for containment and cleaning up:**
Take up dry. Clean up with water.
Dispose contaminated material as waste according to section 13.
 - **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
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7 Handling and storage

- **Precautions for safe handling** No special precautions are necessary if used correctly.
 - **Information about fire - and explosion protection:**
Good ventilation / exhaustion of working place and storage place.
Avoid dust formation when handling larger quantities.
Keep ignition sources away - Do not smoke.
 - **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** No further information
 - **Storage class:** TRHS 510: 11 Combustible solids
 - **Specific end use(s)** No further relevant information available.
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8 Exposure controls/personal protection

- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.

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- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the skin.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:** Dust protection mask.
- **Hand protection** Protective gloves
- **Material of gloves**
 - Rubber gloves
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye/face protection** Safety glasses

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Colour:** Yellow-brown
- **Odour:** Sulfurous
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** 119 °C
- **Boiling point or initial boiling point and boiling range** 445 °C
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** 168 °C
- **Auto-ignition temperature:** 260 °C
- **Decomposition temperature:** Not determined.
- **pH** Not applicable.
- **Viscosity:**
- **Kinematic viscosity** Not applicable.
- **Dynamic:** Not applicable.
- **Solubility**
- **water at 22 °C:** 0.000005 g/l
- **Partition coefficient n-octanol/water (log value)** Not determined.
- **Vapour pressure:** Not applicable.
- **Density and/or relative density**
- **Density at 20 °C:** 1.8–2.06 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Particle characteristics** Not determined

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· Other information	
· Appearance:	
· Form:	Crystalline
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	
· Explosives	Void
	Void
· Flammable gases	Void
	Void
· Aerosols	Void
	Void
· Oxidising gases	Void
	Void
· Gases under pressure	Void
	Void
· Flammable liquids	Void
	Void
· Flammable solids	Void
	Void
· Self-reactive substances and mixtures	Void
	Void
· Pyrophoric liquids	Void
	Void
· Pyrophoric solids	Void
	Void
· Self-heating substances and mixtures	Void
	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
	Void
· Oxidising liquids	Void
	Void
· Oxidising solids	Void
	Void
· Organic peroxides	Void
	Void
· Corrosive to metals	Void
	Void
· Desensitised explosives	Void
	Void

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10 Stability and reactivity

- **Reactivity** No further relevant information available.
 - **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
 - **Possibility of hazardous reactions** Reacts with oxidising agents.
 - **Conditions to avoid** No further relevant information available.
 - **Incompatible materials:**
Strong oxidizing agents
chlorates, perchlorates and permanganates
 - **Hazardous decomposition products:** Sulphur oxides (SO_x)
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11 Toxicological information

- **Information on hazard classes as defined in Regulation (EC) No 1272/2008**
 - **Acute toxicity** Based on available data, the classification criteria are not met.
 - **LD/LC50 values relevant for classification:**
CAS: 7704-34-9 sulfur
Oral LD50 2,000 mg/kg (rat)
Dermal LD50 2,000 mg/kg (rat)
Inhalative LC50 5,430 mg/m³ (rat)
 - **Primary irritant effect:**
 - **Skin corrosion/irritation** Causes skin irritation.
 - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.
 - **Information on other hazards**
 - **Endocrine disrupting properties**
On the basis of the available data, the substance does not meet the criteria for the identification of substances having properties of interference with the endocrine system, in accordance with Article 59, paragraph 1 of the REACH Regulation and the criteria established in the Delegated Regulation (EU) 2017 / 2100 of the Commission or in Commission Regulation (EU) 2018/605.
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12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:**
CAS: 7704-34-9 sulfur
LC50 866 mg/L /96h (Fish)
180 mg/L /96h (fish: oncorhynchus mykiss)
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- EC50 >5,000 mg/L (Daphnia magna)
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Endocrine disrupting properties**
Based on the available data, the substance does not meet the criteria for the identification of substances with properties affecting the endocrine system according to Article 59(1) of the REACH Regulation and the criteria of the Commission Delegated Regulation (EU) 2017/2100 or in the Commission Regulation (EU) 2018/605.
The product does not contain substances with endocrine disrupting properties.
- **Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to local regulations.

14 Transport information

- **UN number or ID number**
- **ADR, IMDG, IATA** UN1350
- **UN proper shipping name**
- **ADR** 1350 SULPHUR
- **IMDG** SULPHUR
- **IATA** Sulphur
- **Transport hazard class(es)**
- **ADR, IMDG, IATA**
- **Class** 4.1 Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- **Label** 4.1
- **Packing group**
- **ADR, IMDG, IATA** III
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Warning: Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- **Hazard identification number (Kemler code):** 40

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· EMS Number:	F-A,S-G
· Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	

· ADR	
· Limited quantities (LQ)	5 kg
· Transport category	3
· Tunnel restriction code	E

· IMDG	
· Limited quantities (LQ)	5 kg
· UN "Model Regulation":	UN 1350 SULPHUR, 4.1, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Not listed
- **REGULATION (EC) No 1907/2006 ANNEX XVII**
Not listed
Conditions of restriction: 75
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **National regulations:**
- **Storage of hazardous substances in nonstationary vessels (TRGS 510) (Germany)**
TRHS 510: 11 Combustible solids
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

- The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.
- **Reasons for alterations** This version replaces all old versions.
 - **Version number of previous version:** 3.00
 - **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation – Category 2