

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 26.04.2022

Version number 3.00

Revision: 26.04.2022

### \* 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Sulfur, purified
- **Article number:** 2652
- **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.

### 3 Composition/information on ingredients

- **Chemical characterisation: Substances**
- **CAS No. Description**  
7704-34-9 sulfur
- **Identification number(s)**
- **EC number:** 231-722-6
- **Index number:** 016-094-00-1
- **INCI-Name** sulfur

### 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 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.
- **Information for doctor:**
- **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.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
All regular extinguishing media can be used.

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Use fire extinguishing methods suitable to surrounding conditions.

· **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.

### 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 item 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.

### 7 Handling and storage

· **Handling:**

· **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.

### 8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:** Not required.

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- **Exposure controls**
- **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.
- **Protection of hands:** 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 protection:** Safety glasses

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form:** Crystalline
  - Colour:** Yellow-brown
- **Odour:** Sulfurous
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
  - Melting point/freezing point:** 119 °C
  - Initial boiling point and boiling range:** 445 °C
- **Flash point:** 168 °C
- **Ignition temperature:** 260 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Not determined.
- **Explosive properties:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower:** Not determined.
  - Upper:** Not determined.
- **Vapour pressure:** Not applicable.
- **Density at 20 °C:** 1.8–2.06 g/cm<sup>3</sup>
- **Relative density** Not determined.

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- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water at 22 °C:** 0.000005 g/l
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.
- **Other information** No further relevant information available.

### 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<sub>x</sub>)

### 11 Toxicological information

- **Information on toxicological effects**
- **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/m<sup>3</sup> (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.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.

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- **Aspiration hazard** Based on available data, the classification criteria are not met.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:**
  - **CAS: 7704-34-9 sulfur**
  - LC50 866 mg/L /96h (Fish)
  - 180 mg/L /96h (fish: oncorhynchus mykiss)
  - EC50 >5,000 mg/L (Daphnia magna)
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
  - Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 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**
- **ADR** UN1350
- **UN proper shipping name**
- **ADR** 1350 SULPHUR
- **Transport hazard class(es)**
- **ADR, IMDG, IATA**
- **Class** 4.1 Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives 4.1
- **Label**
- **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
- **Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:**

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

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Not listed
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Not listed
- **National regulations:**
- **Storage of hazardous substances in 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.
- **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

- **\* Data compared to the previous version altered.**