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

· **Informations to product No. 2354**

· **Product name:**

Schwefelleber, Kaliumsulfid

Kalium sulfuratum pro balneo

Potassium sulfide

· **Supplier of the Product / responsible Company:**

Caesar & Loretz GmbH

Herderstr. 31

40721 Hilden

Tel.: 02103/4994-0

Fax: 02103/32360

e-mail: info@caelo.de

· **Emergency telephone:**

Giftinformationszentrum Mainz

Langenbeckstr. 1, 55131 Mainz

Tel.: 06131/19240

· **Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

· **Application of the substance / mixture:**

Ingredient for pharmaceutical drugs or active pharmaceutical ingredient.

2 Hazards identification

· **GHS-Labeling Elements:**



· **Signal word:** Danger

· **H-Phrases:**

H314 Causes severe skin burns and eye damage

H400 Very toxic to aquatic life

EUH031 Contact with acids liberates toxic gas

· **P-Phrases:**

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

P305 IF IN EYES:


P351 Rinse continuously with water for several minutes

P315 Get immediate medical advice/attention

P273 Avoid release to the environment

Skin Corr. 1B

Aquatic Acute 1

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3 Composition / information on ingredients

• **Chemical characterization:**

CAS-No. Substance name

37199-66-9 Potassium polysulfide

• **EINECS-No.:** 253-390-1

• **Index-No.:** 016-007-00-7

• **REACH Reg. No.:** (pre-registered)

• **INCI-Name:** -

4 First aid measures

• **after inhalation:** Bring the person out of the contaminated area to fresh air, Seek medical help immediately. Show product-label or this MSDS.

• **after skin contact:** Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.

• **after eye contact:** Rinse out with plenty of water with the eyelid wide open , seek medical advice, even if no immediate symptoms are observed.

• **after swallowing:** Do not induce vomiting. Assure medical help immediately.

• **Medical advice:**

• **The following symptoms might occur:** irritation and pain of eyes and mucous membranes. If hydrogen sulphide is released: Headache, Illness, excitation, unconsciousness, respiratory paralysis, cramps and lung edeme possible.

5 Fire-fighting measures

• **Suitable extinguishing media:** All regular extinguishing media can be used. Select fire fighting measures suitable to surrounding environment.

• **Specific hazards during fire fighting:** Not combustible. In case of fire dangerous gases / vapours can be released: Sulphur oxides..

• **Special protective equipment for fire-fighters:** Suitable protective clothes and respiratory protection.

• **Additional information:** Prevent fire extinguishing water from contaminating surface water, the ground water system or soil. Residues must be deposited according to local regulations.


6 Accidental release measures

• **Personal protective measures:** Wear protective equipment. Keep away not protected persons.

• **Environmental protective measures:** Prevent from leaking into sewage water, ground water system or surface waters.

• **Methods for cleaning:** Take up dry. Disposal according to Chapter 13 of this MSDS. Clean up with water.

• **General information:** If the product has entered waters, hydrogen sulfide might have been generated.

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7 Handling and storage

- **Handling:**
- **Advice on safe handling:** No special measures required.
- **Informations to fire or explosion protection:** In fine powder: Flash point > 200 °C, pyrophorous. Keep away from heat and ignition sources.
- **Storage:**
- **Requirements for storage areas and containers:** Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).
- **Advices on common storage:** Do not store together with oxidants or acids.

8 Exposure controls / personal protective equipment

Components with limit values that require monitoring at the workplace:

Hydrogen sulfide: MAK 10 ppm or 15 mg/m³

Sulphur dioxide 2 ppm (ml/m³): 5 mg/m³

• General information:

Preparation of watery solutions: Avoid contact with substance (corrosive).

Shredding of big pieces in closed systems.

• Personal protective equipment:

• **Respiratory protection:** Do not inhale dust. Use H₂S- and SO₂-combination filter: A1, B1, E1, K1, P2 (Dräger).

• **Hand protection:** Protection gloves of rubber or nitrile rubber.

• **Eye protection:** Safety glasses.


• **Body protection:** Protective clothes.

9 Physical and chemical properties

- **Form:** solid
- **Colour:** brown
- **Odour:** smell of hydrogen sulfide
- **Melting point / melting range:** 200 - 250 °C
- **Decomposition temperature:** > 460 °C
- **Density:** (20 °C) 1,1 g/cm³
- **Solubility in / Miscibility with**
- **Water:** (20 °C) 500 g/l
- **pH-range:** (100 g/l, 20 °C) 13

10 Stability and reactivity

- **Thermal decomposition / conditions to avoid:** Thermal decomposition > 460 °C.
- **Materials to avoid:** Acids (Generation of hydrogen sulfide), Strong oxidants
- **Hazardous decomposition products:** Hydrogen sulfide. In case of fire: sulphur dioxide.

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11 Toxicological information

- **Acute toxicity:**

- **LD/LD50-data relevant for hazard classification:**

Hydrogen sulfide LC50 444 mg/l rat

LCLo (inhal) 600 mg/l man

- **Primary irritant effect:**

- **on skin:** Burning effect on skin and mucous membranes.

- **on eyes:** Strong burning effect.

- **on respiratory organs:** corrosive

- **Additional toxicological informations:** If swallowed: Irritation and pain of eyes and mucous membranes.

12 Ecological information

- **Aquatic toxicity:**

Sulfides are toxic for water organisms.

Sulfide ions (toxic reaktion products):

EC50: 12 mg/l

EC100: 33 mg/l

Potassium hydroxide:

Fatal for fishes: 80 mg/l

Harmful for fish nourishing animals:: 200-1000 mg/l

Daphnia magna EC0: 9 mg/l

Sulphur dioxide:

Fatal for fishes: 1 mg/l

Hydrogen sulfide:

Fatal for fishes: 10 mg/l

Harmful for water plants: 50 mg/l

- **General advices:** Prevent from entering sewage water or drainage ditch.

- **Water hazard class:** 2 (VwVwS): hazardous for water.

13 Disposal considerations

- **Product:**

- **Recommendation:** Disposal according to local regulations as pharmaceutical waste or inorganic laboratory chemicals.

- **Empty contaminated packaging:**

- **Recommendation:** Disposal according to the local regulations.

14 Transport informations

- **Land transport according to ADR:**

- **Proper shipping name:** Potassium sulfide, hydrated


- **Class:** 8

- **UN-number:** 1847

- **Packing group:** II

- **Classification code:** C6

- **Limited quantities (Table 3.4.6. ADR):** 1 kg

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- **Hazard classification number:** 80
- **Special provisions (Chapter 3.3 ADR):** 523
- **Additional informations for sea transport IMDG:**
- **EMS-No.:** F-A, S-B
- **Properties:** -

15 Regulatory information

- **Labelling according to actual legislation (GHS, Globally Harmonized System of Classification and Labelling of Chemicals):**

The product is classified and labelled according to GHS-regulations.

- **Hazard symbols:** GHS05, GHS09

- **Signal word:** Danger

- **H-Phrases:**

H314 Causes severe skin burns and eye damage

H400 Very toxic to aquatic life

EUH031 Contact with acids liberates toxic gas

- **P-Phrases:**

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

P305 IF IN EYES:

P351 Rinse continuously with water for several minutes

P315 Get immediate medical advice/attention

P273 Avoid release to the environment

- **National regulations (Germany):**

- **Water hazard class:** see chapter 12

- **Storage class TRGS 510:** 8B

16 Other Information

The information provided in this MSDS is correct to the best of our knowledge at the date of edition.

- **Reason for last revision:** Adjustment to regulation (EC) 1907/2006 (REACH) and GHS-labelling system.