

Material safety data sheet

According to EEC-directive 91/155

1. Identification of the substance / preparation and company

SULPHUR DIOXIDE, LIQUID

Company:

GHC Gerling, Holz & Co. Handels GmbH
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Germany

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2. Composition / information on ingredients

Chemical characterization

Sulphur dioxide	Chemical formula:	SO ₂
CAS No.: 7446-09-5	EC No.:	016-011-00-9
UN No.: 1079	EINECS No.:	2311952
Risk phrases: 23, 34		

3. Hazards identification

Advice on critical hazards to man and the environment:

Toxic by inhalation
Irritating to eyes and respiratory system
Liquefied gas, contact may cause freeze-burns

4. First aid measures

Remove contaminated clothing immediately. Remove breathing apparatus only after soiled clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.

If inhaled:	Supply fresh air or oxygen; call for doctor In case of unconsciousness bring patient into stable side position for transport.
On skin contact:	Instantly wash with water and soap and rinse thoroughly. Sterile bandage. Consult dermatologist
On contact with eyes:	Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult doctor.
On ingestion:	In case of persistent symptoms consult doctor. Drink copious amounts of water and provide fresh air. Instantly call for doctor.
Further medical treatment:	Symptoms may occur delayed. Risk of pulmonary oedema. If inhaled, aerosols of bicarbonate are possible.

5. Fire fighting measures

Suitable extinguishing media:	Product is not combustible. Adapt fire fighting measures to surrounding fire. CO ₂ , sand, extinguishing powder. Do not use water.
Special protective equipment:	Put on breathing apparatus.
Further information:	Cool endangered containers with water – risk of burst

6. Accidental release measures

Personal precautions:	Wear protective equipment. Put on breathing apparatus. Keep unprotected persons away.
Environmental precautions:	Inform authorities if gas escapes. Prevent material from reaching sewage system, holes and cellars.
Methods for cleaning up:	Use neutralizing agent. Dispose of contaminated material as waste according to chapter 13. Ensure adequate ventilation.

7. Handling and storage

Handling:	Information for safe handling: Ensure good ventilation/exhaustion at the workplace. Open and handle container with care. Only handle and refill product in closed systems. Information about protection against fire and explosion: Keep breathing equipment ready.
Storage:	Requirements to be met by storerooms and containers: Store only in the original container. Store in cool location. Information about storage in one common storage facility: not required Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from heat and direct sunlight. Storage class: Class according to regulation on inflammable liquids: Void

8. Exposure controls / personal protection

Additional information on the lay-out of technical plant:

No further data; see chapter 7.

Components with workplace control parameters:

<u>CAS No.</u>	<u>Designation of material</u>	OEL
7446-09-5	Sulphur dioxide	Short-term value: 13mg / m ³ , 5 ml / m ³ Long-term value: 5mg / m ³ , 2ml / m ³

Personal protective equipment:

Respiratory protection:	In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
Hand protection:	Protective gloves.
Eye protection	Tightly sealed safety glasses.
Body protection:	Protective work clothing.
General safety and hygiene measures:	Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Store protective clothing separately. Avoid contact with eyes and skin.

9. Physical and chemical properties

Form:	gaseous	
Colour:	colourless	
Odour:	sulphurous	
Change of physical state:	Melting point/ melting range:	-75,5° C
	Boiling point/ boiling range:	- 10° C
Explosion limits:	-lower:	product is not explosive
	-upper :	product is not explosive
Ignition temperature:	not applicable	
Vapour pressure :	(20° C)	Xx bar
	(50° C)	Xx bar
Density:	(20° C)	1,38 g/l
	(-10° C)	1,46 g/l
Solubility in water:	112,7 g/l (20° C)	
	228,3 g/l (0° C)	
Octanol/water partition coefficient (log poW)	not applicable	

10. Stability and reactivity

Conditions to avoid:	No decomposition if used according to specifications.
Hazardous reactions with:	Strong alkalis and oxidizing agents
Further information:	Product is corrosive if wet. No dangerous decomposition products known.

11. Toxicological information

Acute toxicity	<u>LD/LC50 values that are relevant for classification:</u> 7446-09-5 sulphur dioxide Inhalative: LC50/4 h (static): 2.52 mg/l (rat)
Primary irritant effect:	on the skin: Caustic effect on skin and mucous membranes. on the eye: Strong caustic effect.
Sensitization:	No sensitizing effect known.
Further information:	Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12. Ecological informationElimination information:

Not determined

Behaviour and environmental fate:

Not determined

Ecotoxic effects:Fischtoxizität (akut) LC₁₀₀ Oncorhynchus mykiss: 5 mg/l / 1 hFurther ecological information:

Water hazard class 1 (Assessment by list): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Must not reach sewage water of drainage ditch undiluted or unneutralized.

13. Disposal considerations

Product:

Disposal according to official regulations.
Must not be disposed of together with household garbage.
Do not allow product to reach sewage system.

Package:

Disposal must be made according to official regulations.

14. Transport information

Land transport

ADR/RID	Class:	2	UN No.:	1079
Warning panel: 268	Item no. /letter:	2TC		
Description of the goods:	1079 Sulphur dioxide			

Sea transport

	Class:	2.3	UN No.:	1079
	EMS:	2-08		
Marine pollutant:	no			
Proper technical name:	Sulphur Dioxide, toxic gas			

Air transport

ICAO/IATA	Class:	2	UN/ID No.:	1079
Proper technical name:	Sulphur Dioxide, toxic gas			

15. Regulatory information

EC classification:

Designation according to EC guidelines:
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous materials (GefStoffV)

Code letter and hazard designation of product: **T toxic**

Hazard-determining components of labelling: sulphur dioxide

Risk phrases:

23	Toxic by inhalation.
34	Causes burns

Safety phrases:

9	Keep container in a well ventilated place
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
36/37/39	Wear suitable protective clothing. Gloves and eye / face protection
45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)

Water hazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.

National legislation/regulations Classification according to VbF: Void

GHC Material safety data sheet Date: 02 October 2002

Art. no.: 0800

Version: 0001

Product: **SULPHUR DIOXIDE, LIQUID**

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16. Other information

Recipients of our product must take responsibility for observing existing laws and regulations
The information is based on our present knowledge. It should not therefore be construed as
guaranteeing specific properties of products described or their suitability for a particular
application.