

## Chemical Safety Data Sheet MSDS / SDS

## Sulfuryl chloride

Revision Date:2026-06-06 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : Sulfuryl chloride  
CBnumber : CB6854360  
CAS : 7791-25-5  
EINECS Number : 232-245-6  
Synonyms : sulfuryl chloride,SO<sub>2</sub>Cl<sub>2</sub>

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

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

P271 Use only outdoors or in a well-ventilated area.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

## Hazard statements

H335 May cause respiratory irritation

H330 Fatal if inhaled

H314 Causes severe skin burns and eye damage

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: Sulfuryl chloride
Synonyms	: sulfuryl chloride,SO <sub>2</sub> Cl <sub>2</sub>
CAS	: 7791-25-5
EC number	: 232-245-6
MF	: Cl <sub>2</sub> O <sub>2</sub> S
MW	: 134.97

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### 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) and/or in section 11

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

No data available

### 4.4 Notes to physician

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

Water Foam

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Sulfur oxides

Hydrogen chloride gas

Not combustible.

May not get in touch with: Water

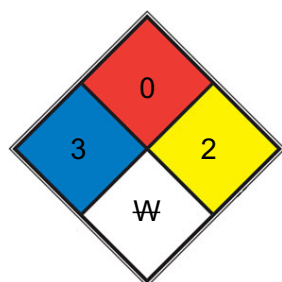
Ambient fire may liberate hazardous vapours.

## 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## NFPA 704



HEALTH	3	Short exposure could cause serious temporary or moderate residual injury (e.g. <a href="#">liquid hydrogen</a> , <a href="#">sulfuric acid</a> , <a href="#">calcium hypochlorite</a> , hexafluorosilicic acid)
FIRE	0	Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)
REACT	2	Undergoes violent chemical change at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water (e.g. white phosphorus, <a href="#">potassium</a> , <a href="#">sodium</a> )
SPEC. HAZ.	W	

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g.

Chemizorb®). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Keep workplace dry. Do not allow product to come into contact with water.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Never allow product to get in contact with water during storage.

Heat sensitive. Store under inert gas. Moisture sensitive.

#### Storage class

Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

['Component', 'CAS-No.', 'Value', 'Control parameters', 'Basis']	['Dichloromethane', '75-09-2', 'PC-TWA', '200 mg/m3', 'Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.']	['', 'Remarks', 'G2A - Probably carcinogenic to humans', 'None, None']
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#### Biological occupational exposure limits

['Component', 'CAS-No.', 'Parameters', 'Value', 'Biological specimen', 'Basis']	['', '75-09-2', 'dichloromet hane', '0.3 mg/l', 'Urine', 'China. Biological Occupational Exposure Indices']	['', 'Remarks', 'End of shift', 'None, None, None']
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### 8.2 Exposure controls

#### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

## Personal protective equipment

### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

### Skin protection

required

### Body Protection

protective clothing

### Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

## Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

a) Physical state	clear, liquid
b) Color	colorless
c) Odor	No data available
d) Melting point/freezing point	No data available
e) Initial boiling point and boiling range	69.1 °C
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	69.1°C
i) Autoignition temperature	Not applicable
j) Decomposition temperature	No data available
k) pH	No data available
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	reacts
n) Partition coefficient n-octanol/water	No data available
o) Vapor pressure	100 mm Hg ( 17.8 °C)
p) Density	1.352 g/mL at 25 °C
Relative density	1.667
q) Relative vapor density	4.7 (vs air)
r) Particle characteristics	No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none
Solubility	Miscible with benzene, toluene, chloroform, ether, carbon tetrachloride and glacial acetic acid.

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## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Chemical stability

sensitive to moisture

### 10.2 Possibility of hazardous reactions

No data available

### 10.3 Conditions to avoid

Moisture.

### 10.4 Incompatible materials

Bases, Alkali metals, Strong acids and strong bases, Strong oxidizing agents, Metals, Amines, Vinyl compounds, Alcohols, Aluminum, Magnesium

### 10.5 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Mixture Acute toxicity

Oral: No data available

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute toxicity estimate Inhalation - 4 h - 7.98 mg/l - vapor(Calculation method)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Dermal: No data available

#### Skin corrosion/irritation

Remarks: Mixture causes burns.

#### Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

Risk of blindness!

#### Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

#### Germ cell mutagenicity

Classified based on available data. For more details, see section 2

#### Carcinogenicity

Evidence of a carcinogenic effect.

### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

### **Specific target organ toxicity - single exposure**

Mixture may cause drowsiness or dizziness.

### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

### **Aspiration hazard**

Classified based on available data. For more details, see section 2

## **11.2 Additional Information**

Dichloromethane is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood., Acts as a simple asphyxiant by displacing air., anesthetic effects, Breathing difficulties, Headache, Dizziness, Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

### **Components Dichloromethane**

#### **Acute toxicity**

LD50 Oral - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Mouse - 4 h - 86 mg/l - vapor

Remarks: (ECHA)

Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

#### **Skin corrosion/irritation**

Skin - Rabbit

Result: Irritations - 4 h (OECD Test Guideline 404)

Remarks: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

#### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Eye irritation

Remarks: (ECHA)

Remarks: Risk of corneal clouding.

#### **Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: negative (OECD Test Guideline 429)

#### **Germ cell mutagenicity**

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

#### **Carcinogenicity**

Suspected of causing cancer.

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Inhalation - May cause drowsiness or dizziness. - Central nervous system

Acute inhalation toxicity - Possible damages: mucosal irritations

#### **Specific target organ toxicity - repeated exposure Aspiration hazard**

Classified based on available data. For more details, see section 2

#### **sulphuryl dichloride Acute toxicity**

Oral: No data available

LC50 Inhalation - Rat - male - 4 h - 0.878 mg/l - vapor

Remarks: (ECHA)

Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages: damage of respiratory tract

Dermal: No data available

#### **Skin corrosion/irritation**

Remarks: No data available

#### **Serious eye damage/eye irritation**

Remarks: No data available

#### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

#### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

#### **Carcinogenicity**

Classified based on available data. For more details, see section 2

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

May cause respiratory irritation.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath,

Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages: damage of respiratory tract

#### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

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## SECTION 12: Ecological information

## 12.1 Toxicity

### Mixture

No data available

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Endocrine disrupting properties

No data available

## 12.7 Other adverse effects

No data available

### Components Dichloromethane

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 193.00 mg/l - 96 h

Remarks: (ECHA)

Toxicity to daphnia static test LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h and other aquatic (US-EPA) invertebrates

Toxicity to bacteria static test EC50 - activated sludge - 2,590 mg/l - 40 min (OECD Test Guideline 209)

Toxicity to flow-through test LC50 - Pimephales promelas (fathead fish(Chronic toxicity) minnow) - 471 mg/l - 8 d

Remarks: (ECHA)

### sulphuryl dichloride

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2927

IMDG: 2927

IATA-DGR: 2927

#### **14.2 UN proper shipping name**

ADR/RID: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (sulphuryl dichloride, Dichloromethane)

IMDG: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (sulphuryl dichloride, Dichloromethane)

IATA-DGR: Toxic liquid, corrosive, organic, n.o.s. (sulphuryl dichloride, Dichloromethane)

#### **14.3 Transport hazard class(es)**

ADR/RID: 6.1 (8)

IMDG: 6.1 (8)

IATA-DGR: 6.1 (8)

#### **14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA-DGR: II

#### **14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA-DGR: no

#### **14.6 Special precautions for user**

Based on chemical properties, choose appropriate tools and conditions of transport.

Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

#### **14.7 Incompatible materials**

Bases, Alkali metals, Strong acids and strong bases, Strong oxidizing agents, Metals, Amines, Vinyl compounds, Alcohols, Aluminum, Magnesium

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## **SECTION 15: Regulatory information**

### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Listed

Measures on the Environmental Administration of New Chemical Substances Registration

Registration/Notification number : 01-2119480404-41-XXXX

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk

management measures identified on the SDS as well as the local/national regulations concerning the chemical.

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.