

## Chemical Safety Data Sheet MSDS / SDS

## Methyl thiocyanate

Revision Date:2026-05-31 Revision Number:1

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

## Product identifier

Product name : Methyl thiocyanate  
CBnumber : CB8853822  
CAS : 556-64-9  
EINECS Number : 209-134-6  
Synonyms : methyl thiocyanate,ch3scn

## 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

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

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

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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

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

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## Hazard statements

H226 Flammable liquid and vapour

H319 Causes serious eye irritation

H335 May cause respiratory irritation

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## SECTION 3: Composition/information on ingredients

### Substance

|              |                              |
|--------------|------------------------------|
| Product name | : Methyl thiocyanate         |
| Synonyms     | : methyl thiocyanate, ch3scn |
| CAS          | : 556-64-9                   |
| EC number    | : 209-134-6                  |
| MF           | : C2H3NS                     |
| MW           | : 73.12                      |

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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. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately.

In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

### 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

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Sulfur oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

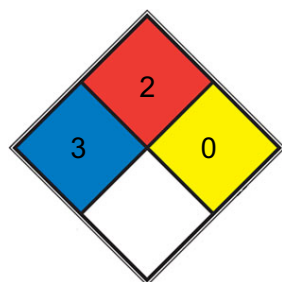
Development of hazardous combustion gases or vapours possible in the event of fire.

## 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.

Remove container from danger zone and cool with water. 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. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

**FIRE 2** Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

**REACT 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

**SPEC.**

**HAZ.**

# 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. Keep away from heat and sources of ignition.

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. Risk of explosion.

### 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.

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### 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

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

#### Storage class

Storage class (TRGS 510): 3: Flammable liquids

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### 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). Safety glasses

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Viton®

Minimum layer thickness: 0.7 mm

Break through time: 30 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

#### Body Protection

Flame retardant antistatic 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. Risk of explosion.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

|                                                 |                                             |
|-------------------------------------------------|---------------------------------------------|
| a) Physical state                               | liquid                                      |
| b) Color                                        | Clear colorless to light yellow             |
| c) Odor                                         | at 0.01% in propylene glycol. sulfury onion |
| d) Melting point/freezing point                 | Melting point/range: -5 °C                  |
| e) Initial boiling point and boiling range      | 131 °C at 1,013 hPa                         |
| f) Flammability (solid, gas)                    | No data available                           |
| g) Upper/lower flammability or explosive limits | No data available                           |
| h) Flash point                                  | 43.3 °C - closed cup                        |
| i) Autoignition temperature                     | No data available                           |
| j) Decomposition temperature                    | No data available                           |
| k) pH                                           | No data available                           |

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| l) Viscosity                             | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility                      | Practically insoluble in water                                                   |
| n) Partition coefficient n-octanol/water | No data available                                                                |
| o) Vapor pressure                        | No data available                                                                |
| p) Density                               | 1.052 g/cm <sup>3</sup> at 25 °C                                                 |
| Relative density                         | 1.08                                                                             |
| q) Relative vapor density                | No data available                                                                |
| r) Particle characteristics              | No data available                                                                |
| s) Explosive properties                  | No data available                                                                |
| t) Oxidizing properties                  | No data available                                                                |
| Solubility                               | Chloroform (Soluble), Methanol (Slightly)                                        |
| Dielectric constant                      | 4.3 (19°C)                                                                       |

## 9.2 Other safety information

No data available

# SECTION 10: Stability and reactivity

## 10.1 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## 10.2 Possibility of hazardous reactions

Exothermic reaction with:

Oxidizing agents

A risk of explosion and/or of toxic gas formation exists with the following substances: acids

Violent reactions possible with:

Alcohols

Amines

Bases

## 10.3 Conditions to avoid

Heating.

## 10.4 Incompatible materials

Strong oxidizing agents

## 10.5 Hazardous decomposition products

In the event of fire: see section 5

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Acute toxicity**

LD50 Oral - Rat - 60 mg/kg

LC50 Inhalation - 4 h - 3 mg/l - vapor

LD50 Dermal - 300 mg/kg

LD50 Intravenous - Mouse - 18 mg/kg

**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**

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

**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**

Inhalation - May cause respiratory irritation.

**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**

RTECS: XL1575000 burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea,

Vomiting, Repeated exposure may cause asthma., prolonged or repeated exposure can cause:, Dizziness

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## SECTION 12: Ecological information

**12.1 Toxicity**

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

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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: 2929

IMDG: 2929

IATA-DGR: 2929

## 14.2 UN proper shipping name

ADR/RID: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (Methyl thiocyanate)

IMDG: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (Methyl thiocyanate)

IATA-DGR: Toxic liquid, flammable, organic, n.o.s. (Methyl thiocyanate)

## 14.3 Transport hazard class(es)

ADR/RID: 6.1 (3)

IMDG: 6.1 (3)

IATA-DGR: 6.1 (3)

## 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

Strong oxidizing agents

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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

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 : B1A22220836

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.