

# SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Aug 12, 2017

Revision Date: Aug 12, 2017

## 1. Identification

### 1.1 GHS Product identifier

Product name	Methylenedithiocyanate
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### 1.2 Other means of identification

Product number	–
Other names	Methylene thiocyanate

### 1.3 Recommended use of the chemical and restrictions on use

Identified uses	For industry use only.
Uses advised against	no data available

## 2. Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Oral, Category 3

Skin corrosion, Category 1B

Skin sensitization, Category 1

Acute toxicity - Inhalation, Category 2

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

### 2.2 GHS label elements, including precautionary statements

Pictogram(s)	
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<b>Signal word</b>	Danger
<b>Hazard statement(s)</b>	<p>H301 Toxic if swallowed</p> <p>H314 Causes severe skin burns and eye damage</p> <p>H317 May cause an allergic skin reaction</p> <p>H330 Fatal if inhaled</p> <p>H400 Very toxic to aquatic life</p>
<b>Precautionary statement(s)</b>	
<b>Prevention</b>	<p>P264 Wash ... thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p> <p>P273 Avoid release to the environment.</p>
<b>Response</b>	<p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...</p> <p>P321 Specific treatment (see ... on this label).</p> <p>P330 Rinse mouth.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER/doctor/...</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water/...</p> <p>P333+P313 If skin irritation or rash occurs: Get medical</p>

	<p>advice/attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P320 Specific treatment is urgent (see ... on this label).</p> <p>P391 Collect spillage.</p>
<b>Storage</b>	<p>P405 Store locked up.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p>
<b>Disposal</b>	<p>P501 Dispose of contents/container to ...</p>

### 2.3 Other hazards which do not result in classification

none

## 3. Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Methylenedithiocyanate	Methylenedithiocyanate	6317-18-6	none	1

## 4. First-aid measures

### 4.1 Description of necessary first-aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

Fresh air, rest. Refer for medical attention.

#### In case of skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

#### In case of eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### If swallowed

Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Rest.

### 4.2 Most important symptoms/effects, acute and delayed

**SYMPTOMS:** Symptoms of exposure to this compound include severe eye damage, skin and respiratory tract irritation, corrosion, breathing difficulty, pulmonary edema and allergic skin reactions. It may also cause lacrimation.

**ACUTE/CHRONIC HAZARDS:** This compound is a lacrimator. It can cause severe eye damage, skin irritation and corrosive. When heated to decomposition it emits toxic fumes of nitrogen oxides and sulfur oxides.

#### **4.3 Indication of immediate medical attention and special treatment needed, if necessary**

##### **Absorption, Distribution and Excretion**

... Chemical disposition studies of (14)C labeled methylene bis(thiocyanate) were conducted in male F344/N rats. In these studies more than 90% of the admin radioactivity was eliminated in 48 hr. ... As the dose was incr from 0.2 to 1 to 10 mg/kg, greater percentages of the admin radioactivity remained in the tissues. Blood cyanide concn were incr shortly after the admin of 10 mg/kg (14)C methylene bis(thiocyanate) but were similar to control values 2 hr after dosing.

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### **5. Fire-fighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher.

#### **5.2 Specific hazards arising from the chemical**

Flash point data for this chemical are not available; however, it is probably combustible.

#### **5.3 Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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### **6. Accidental release measures**

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

#### **6.2 Environmental precautions**

Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations. Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT wash away into sewer.

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

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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### **7. Handling and storage**

#### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Separated from food and feedstuffs. Well closed.

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### **8. Exposure controls/personal protection**

#### **8.1 Control parameters**

**Occupational Exposure limit values**

no data available

**Biological limit values**

no data available

**8.2 Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**8.3 Individual protection measures, such as personal protective equipment (PPE)****Eye/face protection**

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Respiratory protection**

Wear dust mask when handling large quantities.

**Thermal hazards**

no data available

**9. Physical and chemical properties**

Physical state	yellow crystalline powder
Colour	Yellow to light orange-colored solid
Odour	no data available
Melting point/ freezing point	-5° C(lit.)
Boiling point or initial boiling point and boiling range	107° C/0.04mmHg(lit.)
Flammability	Gives off irritating or toxic fumes (or gases) in a fire.

Lower and upper explosion limit / flammability limit	no data available
Flash point	-1° C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Decomposes
Partition coefficient n-octanol/water (log value)	no data available
Vapour pressure	no data available
Density and/or relative density	1.403 g/cm <sup>3</sup>
Relative vapour density	no data available
Particle characteristics	no data available

## 10.Stability and reactivity

### 10.1Reactivity

no data available

### 10.2Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

METHYLENEBIS(THIOCYANATE) reacts vigorously with strong bases and strong oxidizing agents such as hydrogen peroxide. Hydrolyzes slowly with water at boiling temperatures and reacts slowly and exothermically with aqueous acids .

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

When heated to decomposition it emits very toxic fumes of NO<sub>x</sub> and SO<sub>x</sub>.

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## 11. Toxicological information

### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

Cancer Classification: Group B2 Probable Human Carcinogen (Based on Metam Sodium Data)

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

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## 12. Ecological information

### 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

## 12.2 Persistence and degradability

Based upon the hydrolysis of methylene thiocyanate in aqueous environments(1), biodegradation is not expected to be a primary removal process(SRC).

## 12.3 Bioaccumulative potential

Bioconcentration is not expected to be an important environmental fate process for methylene thiocyanate because this compound is expected to hydrolyze in aquatic environments(1).

## 12.4 Mobility in soil

Adsorption of methylene thiocyanate is not expected to be important because this compound hydrolyzes rapidly(1).

## 12.5 Other adverse effects

no data available

# 13. Disposal considerations

## 13.1 Disposal methods

### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

# 14. Transport information

## 14.1 UN Number

ADR/RID: UN2928	IMDG: UN2928	IATA: UN2928
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## 14.2 UN Proper Shipping Name

ADR/RID: TOXIC SOLID, CORROSIVE, ORGANIC, N. O. S.
IMDG: TOXIC SOLID, CORROSIVE, ORGANIC, N. O. S.
IATA: TOXIC SOLID, CORROSIVE, ORGANIC, N. O. S.

## 14.3 Transport hazard class(es)

ADR/RID: 6. 1	IMDG: 6. 1	IATA: 6. 1
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**14.4Packing group, if applicable**

ADR/RID: II	IMDG: II	IATA: II
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**14.5Environmental hazards**

ADR/RID: yes	IMDG: yes	IATA: yes
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**14.6Special precautions for user**

no data available

**14.7Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

no data available

**15.Regulatory information****15.1Safety, health and environmental regulations specific for the product in question**

Chemical name	Common names and synonyms	CAS number	EC number
Methylenedithiocyanate	Methylenedithiocyanate	6317-18-6	none
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.

**16.Other information**

#### Information on revision

Creation Date	Aug 12, 2017
Revision Date	Aug 12, 2017

#### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

#### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

*Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*