

## Chemical Safety Data Sheet MSDS / SDS

## TOLUENE (METHYL-13C)

Revision Date:2023-11-29 Revision Number:1

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

## Product identifier

Product name : TOLUENE (METHYL-13C)  
CBnumber : CB3684865  
CAS : 6933-23-9

## 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 : 400-158-6606

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P403+P235 Store in a well-ventilated place. Keep cool.  
P370+P378 In case of fire: Use ... for extinction.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

## Hazard statements

H319 Causes serious eye irritation  
H332 Harmful if inhaled  
H336 May cause drowsiness or dizziness  
H373 May cause damage to organs through prolonged or repeated exposure  
H411 Toxic to aquatic life with long lasting effects

H315 Causes skin irritation  
H304 May be fatal if swallowed and enters airways  
H225 Highly Flammable liquid and vapour

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## SECTION 3: Composition/information on ingredients

### Substance

|              |                                 |
|--------------|---------------------------------|
| Product name | : TOLUENE (METHYL-13C)          |
| CAS          | : 6933-23-9                     |
| MF           | : C <sub>7</sub> H <sub>8</sub> |
| MW           | : 93.15                         |

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## SECTION 4: First aid measures

### Description of first aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

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

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

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

#### Unsuitable extinguishing media

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

### Special hazards arising from the substance or mixture

Carbon oxides Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

### **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.

### **Further information**

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6: Accidental release measures**

### **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.

### **Environmental precautions**

Do not let product enter drains. Risk of explosion.

### **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.

Chemisorb?). Dispose of properly. Clean up affected area.

### **Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **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.

### 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.

#### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

### Exposure controls

#### 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

required

##### 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.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

##### 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

|            |                   |
|------------|-------------------|
| Appearance | liquid            |
| Odour      | No data available |

|  |   |
|--|---|
| Odour Threshold                              | No data available   |
| pH   | No data available   |
| Melting point/freezing point                 | Melting point/range: -93 °C - lit.  |
| Initial boiling point and boiling range      | 110 °C - lit.   |
| Flash point                                  | 4 °C  |
| Evaporation rate                             | No data available   |
| Flammability (solid, gas)                    | No data available   |
| Upper/lower flammability or explosive limits | Upper explosion limit: 7 %(V) Lower explosion limit: 1,2 %(V)                 |
| Vapour pressure                              | 29,1 hPa at 20,0 °C   |
| Vapour density                               | No data available   |
| Relative density                             | 0,874 g/mL at 25 °C No data available   |
| Water solubility                             | No data available   |
| Partition coefficient: n-octanol/water       | No data available   |
| Autoignition temperature                     | 535,0 °C  |
| Decomposition temperature                    | No data available   |
| Viscosity                                    | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |
| Explosive properties                         | No data available   |
| Oxidizing properties                         | No data available   |

### Other safety information

No data available

## SECTION 10: Stability and reactivity

### Reactivity

Vapors may form explosive mixture with air.

### Chemical stability

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

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Warming.

### Incompatible materials

Strong oxidizing agents

### Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male - 5.580 mg/kg (Tested according to Directive 92/69/EEC.)

LC50 Inhalation - Rat - male and female - 4 h - 25,7 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rabbit - > 5.000 mg/kg Remarks: (ECHA)

#### Skin corrosion/irritation

Skin - Rabbit

Result: irritating - 4 h Remarks: (ECHA)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation (OECD Test Guideline 405)

#### Respiratory or skin sensitization

(Regulation (EC) No. 440/2008, Annex, B.6)

#### Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: negative

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation

Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative

Test Type: Chromosome aberration test Species: Rat

Cell type: Bone marrow Application Route: i.p.

Result: negative Remarks: (ECHA)

#### Carcinogenicity

No data available

#### Reproductive toxicity

Suspected of damaging the unborn child.

#### Specific target organ toxicity - single exposure

May cause drowsiness or dizziness. - Central nervous system

#### Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure. - Central nervous system

#### Aspiration hazard

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

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## SECTION 12: Ecological information

### Toxicity

#### Toxicity to fish

flow-through test LC50 - Oncorhynchus kisutch (coho salmon) - 5,5 mg/l - 96 h

Remarks: (ECHA)

#### **Toxicity to daphnia and other aquatic invertebrates**

EC50 - Ceriodaphnia dubia (water flea) - 3,78 mg/l - 48 h (US-EPA)

#### **Toxicity to bacteria**

static test EC50 - Bacteria - 84 mg/l - 24 h

Remarks: (ECHA)

#### **Persistence and degradability**

Biodegradability aerobic - Exposure time 20 d

Result: 86 % - Readily biodegradable. Remarks: (IUCLID)

#### **Bioaccumulative potential**

Bioaccumulation Leuciscus idus (Golden orfe) - 3 d

- 0,05 mg/l(Toluene- $\alpha$ -13C)

Bioconcentration factor (BCF): 90

#### **Mobility in soil**

No data available

#### **Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### **Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

#### **Waste treatment methods**

#### **Product**

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14: Transport information

#### **UN number**

ADR/RID: 1294 IMDG: 1294

### UN proper shipping name

ADR/RID: TOLUENE IMDG: TOLUENE IATA: Toluene

### Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

### Packaging group

ADR/RID: II IMDG: II IATA: II

### Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

### Special precautions for user

No data available

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## SECTION 15: Regulatory information

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

#### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

#### Measures for Environmental Management of New Chemical Substances

Vietnam National Chemical Inventory:Not Listed. website: <https://chemicaldata.gov.vn/>

United States Toxic Substances Control Act (TSCA) Inventory:Not Listed. website: <https://www.epa.gov/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Not Listed. website: <https://emb.gov.ph/>

New Zealand Inventory of Chemicals (NZIoC):Not Listed. website: <https://www.epa.govt.nz/>

Korea Existing Chemicals List (KECL):Not Listed. website: <http://ncis.nier.go.kr>

European Inventory of Existing Commercial Chemical Substances (EINECS):Not Listed. website: <https://echa.europa.eu/>

EC Inventory:Not Listed.

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Not Listed. website: <https://www.mee.gov.cn/>

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## SECTION 16: Other information

### Abbreviations and acronyms

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

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit



TWA: Time Weighted Average

## References

- 【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- 【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- 【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>
- 【4】 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)
- 【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- 【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- 【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- 【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- 【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- 【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

### Disclaimer:

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