

Safety Data Sheet

Product name: 1,2,4,5-Tetramethylbenzene

CAS No.: 95-93-2

Prepared in accordance with GB/T 16483, GB/T 17519

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

>Product identifier

- Product name: 1,2,4,5-Tetramethylbenzene
- CBnumber: CB8262899
- CAS: 95-93-2
- EINECS Number: 202-465-7
- Synonyms: 1,2,4,5-tetramethylbenzene,Durene

>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: Linyi Tuohui New Materials Co., Ltd.
- Address: Room A6159, 6F, Building 1, Linyi Software Park, No.6 Yihe Road, Zhimadun Subdistrict, Yishui New Area, Linyi City, Shandong Province, China
- Telephone: +86 176 6460 5089 (Manager Niu) / +86 130 4664 1786 (Manager Li)
- Email: nathan@tuohui-chem.com
- WhatsApp: +86 176 6460 5089
- Emergency telephone: +86 176 6460 5089

SECTION 2: Hazards identification

>GHS Label elements, including precautionary statements

- Symbol(GHS)



- Signal wordDanger

Precautionary statements

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

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.

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

Hazard statements

H228 Flammable solid

H413 May cause long lasting harmful effects to aquatic life

SECTION 3: Composition/information on ingredients

>Substance

- Product name: 1,2,4,5-Tetramethylbenzene
- Synonyms: 1,2,4,5-tetramethylbenzene,Durene
- CAS: 95-93-2
- EC number: 202-465-7
- MF: C₁₀H₁₄
- MW: 134.22

SECTION 4: First aid measures

>Description of first aid measures

General advice

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

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

>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

SECTION 5: Firefighting measures

>Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

>Special hazards arising from the substance or mixture

Carbon oxides

>Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

>Further information

Use water spray to cool unopened containers.

>NFPA 704

0

2

SECTION 6: Accidental release measures

>Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

For personal protection see section 8.

>Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

>Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an

electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

>Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

>Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

>Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

>Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

>control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

>Exposure controls

Appropriate engineering controls

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

Personal protective equipment

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

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 Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: Dermatril (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: Dermatril (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full- face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

>Information on basic physicochemical properties

- Appearance colorless crystalline
- Odour No data available
- Odour Threshold No data available
- pH No data available

- Melting point/freezing pointMelting point/range: 76 - 80 °C - lit.
- Initial boiling point and boiling range196-197 °C
- Flash point74 °C - closed cup
- Evaporation rateNo data available
- Flammability (solid, gas)The substance or mixture is a flammable solid with the category 1.
- Upper/lower flammability or explosive limitsNo data available
- Vapour pressure 160 mm Hg (140 °C)
- Vapour density 4.6 (vs air)
- Relative density0,838 g/mL at 25 °C
- Water solubility0,00348 g/l at 25 °C
- Partition coefficient: n-octanol/waterlog Pow: 4,17
- Autoignition temperatureNo data available
- Decomposition temperatureNo data available
- ViscosityNo data available
- Explosive propertiesNo data available
- Oxidizing propertiesNo data available
- Henry's Law Constant2.49 at 25 °C (approximate - calculated from water solubility and vapor pressure)

>Other safety information

No data available

SECTION 10: Stability and reactivity

>Reactivity

No data available

>Chemical stability

Stable under recommended storage conditions.

>Possibility of hazardous reactions

>Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

>Incompatible materials

Strong oxidizing agents

>Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

>Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 6.700 mg/kg Remarks: (RTECS)

Skin corrosion/irritation

Serious eye damage/eye irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard

Additional Information

RTECS: DC0500000

The data available to us do not suffice to permit any industrial-toxicological assessment. Further toxicological data:

Risk of absorption.

Other dangerous properties can not be excluded. Further data:

Handle in accordance with good industrial hygiene and safety practice.

Toxicity

LD50 orally in Rabbit: 6700 mg/kg

SECTION 12: Ecological information

>Toxicity

Toxicity to fish

LC0 - Leuciscus idus (Golden orfe) - 10 mg/l - 48 h Remarks: (ECOTOX Database)

LC50 - Leuciscus idus (Golden orfe) - 30 mg/l - 48 h Remarks: (ECOTOX Database)

LC100 - Leuciscus idus (Golden orfe) - 50 mg/l - 48 h Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 0,47 mg/l - 48 h Remarks: (External MSDS)

>Persistence and degradability

Not readily biodegradable.

>Bioaccumulative potential

>Mobility in soil

>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.

>Toxics Screening Level

The initial threshold screening level (ITSL) for 1,2,4,5-tetramethyl benzene is 20 µg/m³ (annual averaging time).

>Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

>Waste treatment methods

> Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

> Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

>UN number

ADR/RID: 1325 IMDG: 1325 IATA: 1325

>UN proper shipping name

ADR/RID: FLAMMABLE SOLID, ORGANIC, N.O.S. (1,2,4,5-tetramethylbenzene) IMDG: FLAMMABLE SOLID, ORGANIC, N.O.S. (1,2,4,5-tetramethylbenzene)

IATA: Flammable solid, organic, n.o.s. (1,2,4,5-tetramethylbenzene)

>Transport hazard class(es)

ADR/RID: 4.1 IMDG: 4.1 IATA: 4.1

>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

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:Listed. website: <https://www.mem.gov.cn/>

Measures for Environmental Management of New Chemical Substances

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

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
- 【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/>