

## Chemical Safety Data Sheet MSDS / SDS

## P-XYLENE

Revision Date:2025-02-01 Revision Number:1

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

## Product identifier

Product name : P-XYLENE  
CBnumber : CB2136488  
CAS : 106-42-3  
EINECS Number : 203-396-5  
Synonyms : p-xylene, PARA-XYLENE

## 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

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

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

P391 Collect spillage. Hazardous to the aquatic environment

P370+P378 In case of fire: Use ... for extinction.

P311 Call a POISON CENTER or doctor/physician.

P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

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

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

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

P273 Avoid release to the environment.

#### **Hazard statements**

H411 Toxic to aquatic life with long lasting effects

H371 May cause damage to organs

H370 Causes damage to organs

H360 May damage fertility or the unborn child

H336 May cause drowsiness or dizziness

H332 Harmful if inhaled

H319 Causes serious eye irritation

H315 Causes skin irritation

H312 Harmful in contact with skin

H304 May be fatal if swallowed and enters airways

H226 Flammable liquid and vapour

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## SECTION 3: Composition/information on ingredients

### **Substance**

|              |                                  |
|--------------|----------------------------------|
| Product name | : P-XYLENE                       |
| Synonyms     | : p-xylene, PARA-XYLENE          |
| CAS          | : 106-42-3                       |
| EC number    | : 203-396-5                      |
| MF           | : C <sub>8</sub> H <sub>10</sub> |
| MW           | : 106.17                         |

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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.

#### **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. 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**

Carbon dioxide (CO<sub>2</sub>) Foam 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.

Vapors are heavier than air and may spread along floors.

Risk of dust explosion.

Forms explosive mixtures with air at elevated temperatures.

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

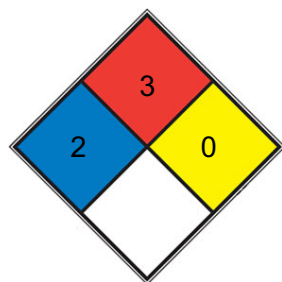
### **Advice for firefighters**

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.

### **NFPA 704**



■ HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

|   |   |   |
|---|---|---|
|   |   | Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature   |
| <span style="color: red;">■</span> FIRE     | 3 | conditions . Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, <a href="#">acetone</a> ) |
| <span style="color: yellow;">■</span> REACT | 0 | Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N2</a> )   |
| <input type="checkbox"/> SPEC.              |   |   |
| <input type="checkbox"/> HAZ.               |   |   |

## 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.

## 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

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 EN374 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: Viton?

Minimum layer thickness: 0,7 mm Break through time: 480 min

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

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 EN374 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: Nitrile rubber

Minimum layer thickness: 0,4 mm Break through time: 30 min

Material tested: Camatril? (KCL 730 / Aldrich Z677442, Size M)

##### Body Protection

Flame retardant antistatic protective clothing.

##### Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

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.

### Exposure limits

TLV-TWA100 ppm ( $\sim 434 \text{ mg/m}^3$ ) (ACGIH, MSHA, and OSHA); STEL 150 ppm ( $\sim 651 \text{ mg/m}^3$ ) (ACGIH); ceiling 200 ppm/ 10 min (NIOSH); IDLH 1000 ppm (NIOSH).

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

|  |   |
|--|---|
| Appearance                                   | liquid, clear   |
| Odour  | No data available   |
| Odour Threshold                              | 0.058ppm  |
| pH   | No data available   |
| Melting point/freezing point                 | Melting point/range: 12 - 13 °C - lit. 138 °C - lit.  |
| Initial boiling point and boiling range      | 138 °C - lit.   |
| Flash point                                  | 27 °C - closed cup  |
| 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: 1,1 %(V)   |
| Vapour pressure                              | 124,1 hPa at 2,6 °C   |
| Vapour density                               | 3.7 (vs air)  |
| Relative density                             | No data available   |
| Water solubility                             | 146 g/l at 25 °C - partly soluble   |
| Partition coefficient: n-octanol/water       | log Pow: 3,15 at 20 °C - Bioaccumulation is not expected.   |
| Autoignition temperature                     | 529,0 °C at 1.013 hPa   |
| Decomposition temperature                    | No data available   |
| Viscosity                                    | Viscosity, kinematic: No data available Viscosity, dynamic: 0,58 mPa.s at 25 °C   |
| Explosive properties                         | No data available   |
| Oxidizing properties                         | No data available   |
| Henry's Law Constant                         | 16.1 at 45.00 °C, 18.6 at 50.00 °C, 20.3 at 55.00 °C, 23.4 at 60.00 °C, 30.5 at 70.00 °C (static headspace-GC, Park et al., 2004) |
| $\lambda_{\text{max}}$                       | $\lambda$ : 294 nm Amax: 1.00   |
|  | $\lambda$ : 320 nm Amax: 0.10   |
|  | $\lambda$ : 350 nm Amax: 0.05   |
|  | $\lambda$ : 380-400 nm Amax: 0.01   |

### Other safety information

Surface tension 28,01 mN/m at 25 °C

28,3 mN/m at 20,0 °C

## SECTION 10: Stability and reactivity

### Reactivity

Vapor/air-mixtures are explosive at intense warming.

### Chemical stability

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

### **Possibility of hazardous reactions**

Risk of explosion with: Strong oxidizing agents conc. sulfuric acid

Nitric acid

uranium hexafluoride sulfur

### **Conditions to avoid**

Heating.

### **Incompatible materials**

rubber, various plastics

### **Hazardous decomposition products**

In the event of fire: see section 5

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## **SECTION 11: Toxicological information**

### **Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - Rat - male - 3.523 mg/kg

(EC Directive 92/69/EEC B.1 Acute Toxicity (Oral))

LC50 Inhalation - Rat - male and female - 4 h - 27,12 mg/l (US-EPA)

Symptoms: Inhalation may lead to the formation of oedemas in the respiratory tract. LD50 Dermal - Rabbit - male - 12.126 mg/kg

Remarks: (ECHA)

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

Skin - Rabbit

Result: Moderate skin irritation - 4 h (Regulation (EC) No. 440/2008, Annex, B.4)

Drying-out effect resulting in rough and chapped skin. Dermatitis

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

No data available

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

(OECD Test Guideline 429)

#### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Remarks: (National Toxicology Program) Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: Regulation (EC) No. 440/2008, Annex, B.19 Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: Mutagenicity (in vitro mammalian cytogenetic test)

Result: negative

Test Type: Mutagenicity (mammal cell test): micronucleus. Species: Mouse

Cell type: Red blood cells (erythrocytes) Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative

Remarks: (IUCLID)

Test Type: dominant lethal test Species: Mouse

Application Route: Subcutaneous Method: OECD Test Guideline 478 Result: negative

#### **Carcinogenicity**

No data available

#### **Reproductive toxicity**

May cause reproductive disorders.

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

Inhalation - May cause respiratory irritation.

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

No data available

#### **Aspiration hazard**

May be fatal if swallowed and enters airways.

#### **Toxicity**

LD50 orally in Rabbit: 3910 mg/kg

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## SECTION 12: Ecological information

### **Toxicity**

#### **Toxicity to fish**

static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 2,60 mg/l

- 96 h

(OECD Test Guideline 203)

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

EC50 - *Daphnia magna* (Water flea) - 35,50 - 63,10 mg/l - 48 h Remarks: (ECOTOX Database)

#### **Toxicity to algae**

static test EC50 - *Pseudokirchneriella subcapitata* - 4,36 mg/l - 73 h (OECD Test Guideline 201)

#### **Toxicity to bacteria**

static test NOEC - activated sludge - 16,2 mg/l - 28 h Remarks: (ECHA)

### **Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d

Result: 98 % - Readily biodegradable. (OECD Test Guideline 301F)

### **Bioaccumulative potential**

Bioaccumulation *Oncorhynchus mykiss* (rainbow trout) - 56 d

at 10 °C - 1,3 mg/l(p-xylene)

Bioconcentration factor (BCF): 7,4 - 18,5



### **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.

### **Toxics Screening Level**

The Initial Threshold Screening Level (ITSL) for p-xylene is 390 µg/m<sup>3</sup> with annual averaging time.

### **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: 1307 IMDG: 1307

### **UN proper shipping name**

ADR/RID: XYLENES IMDG: XYLENES IATA: Xylenes

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

ADR/RID: 3 IMDG: 3 IATA: 3

### **Packaging group**

ADR/RID: III IMDG: III IATA: III

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

### Measures for Environmental Management of New Chemical Substances

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

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

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

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

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

EC Inventory: Listed.

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

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

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## SECTION 16: Other information

### 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

【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/>

### Other Information

Depending on the degree of exposure, periodic medical examination is indicated. The recommendations on this Card also apply to technical

xylene. See ICSCs 0084 and 0085.

**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.