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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1 Product identifiers

Product name : p-Xylene, 99% Product Code: X 1225 CAS-No. : 106-42-3

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Flammable liquids (Category 3), H226 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Aspiration hazard (Category 1), H304 Long-term (chronic) aquatic hazard (Category 3), H412 For the full text of the H-Statements mentioned in this Section, see Section 16. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Danger Hazard statement(s) Flammable liquid and vapor. H226 May be fatal if swallowed and enters airways. H304 H312 + H332 Harmful in contact with skin or if inhaled. Causes skin irritation. H315 Causes serious eye irritation. H319 May cause respiratory irritation. H335 H412 Harmful to aquatic life with long lasting effects. Precautionary statement(s) P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face P280 protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P331 Do NOT induce vomiting. Supplemental Hazard Statements none Reduced Labeling (<= 125 ml) Pictogram Signal Word Danger Hazard statement(s) H304 May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects. H412 Precautionary statement(s) P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P331 Do NOT induce vomiting. Supplemental Hazard none Statements 2.3 Other hazards 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.

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SECTION 3: Composition/information on ingredients

3.1 Substances Synonyms : 1,4-Dimethylbenzene Formula : C8H10 Molecular weight : 106,17 g/mol CAS-No. : 106-42-3 EC-No. : 203-396-5

Component	Classification	Concentration	
p-xylene			
CAS-No. 106-42-3	Flam. Liq. 3; Acute Tox. 4;	<= 100 %	
EC-No. 203-396-5	Skin Irrit. 2; Eye Irrit. 2;		
	STOT SE 3; Asp. Tox. 1;		
	Aquatic Chronic 3; H226,		
	H332, H312, H315, H319,		
	H335, H304, H412		

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 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. 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.

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

2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Carbon dioxide (CO2) Foam 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
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.
5.4 Further information

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

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.

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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. **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. Hvgiene 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. Storage class Storage class (TRGS 510): 3: Flammable liquids 7.3 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 8.1 Control parameters Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eve/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). Full contact Material: Viton® Minimum layer thickness: 0,7 mm Break through time: 480 min 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). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,4 mm Break through time: 30 min Body Protection Flame retardant antistatic protective clothing. Respiratory protection

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

SECTION 9: Physical and chemical properties

a) Physical state b) Color c) Odor d) Melting Melting point/range: point/freezing point e) Initial boiling point and boiling range f) Flammability (solid, gas) g) Upper/lower flammability or explosive limits h) Flash point i) Autoignition temperature j) Decomposition temperature k) pH I) Viscosity

```
m) Water solubility
n) Partition coefficient: log Pow:
n-octanol/water
o) Vapor pressure
p) Density
Relative density
q) Relative vapour
density
r) Particle
characteristics
s) Explosive properties
t) Oxidizing properties
9.2 Other safety information
Surface tension 28,01 mN/m at 25 °C
28,3 mN/m at 20,0 °C
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SECTION 10: Stability and reactivity

10.1 Reactivity
Vapor/air-mixtures are explosive at intense warming.
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature)
10.3 Possibility of hazardous reactions
Risk of explosion with:
Strong oxidizing agents
conc. sulfuric acid
Nitric acid
uranium hexafluoride
sulfur
10.4 Conditions to avoid
Heating.
10.5 Incompatible materials

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9.1 Information on basic physical and chemical propertiesa) Physical stateliquid, clearb) ColorNo data availablec) OdorNo data availabled) Melting Melting point/range:12 - 13 °C - lit.

138 °C - lit.

No data available

Upper explosion limit: 7 %(V) Lower explosion limit: 1,1 %(V)

27 °C - closed cup 529,0 °C at 1.013 hPa No data available

No data available

Viscosity, kinematic: No data available Viscosity, dynamic: 0,58 mPa.s at 25 °C 146 g/l at 25 °C - partly soluble 3,15 at 20 °C - Bioaccumulation is not expected.

124,1 hPa at 2,6 °C 0,861 g/cm3 at 20 °C - lit. No data available No data available

No data available

No data available

none

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rubber, various plastics 10.6 Hazardous decomposition products In the event of fire: see section 5

SECTION 11: Toxicological information 11.1 Information on toxicological effects Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals: Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L. Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Special Remarks on Toxicity to Animals: Not available. Special Remarks on other Toxic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 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) Toxicity to fish(Chronic toxicity) flow-through test NOEC - Danio rerio (zebra fish) - 0,71 mg/l - 35 d (OECD Test Guideline 210) Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) EC50 - Daphnia magna (Water flea) - 2,9 mg/l - 21 d (OECD Test Guideline 211) NOEC - Daphnia magna (Water flea) - 1,57 mg/l - 21 d (OECD Test Guideline 211) 12.2 Persistence and degradability Biodegradability aerobic - Exposure time 28 d Result: 98 % - Readily biodegradable. (OECD Test Guideline 301F) 12.3 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 12.4 Mobility in soil No data available 12.5 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. 12.6 Endocrine disrupting properties Product: Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission

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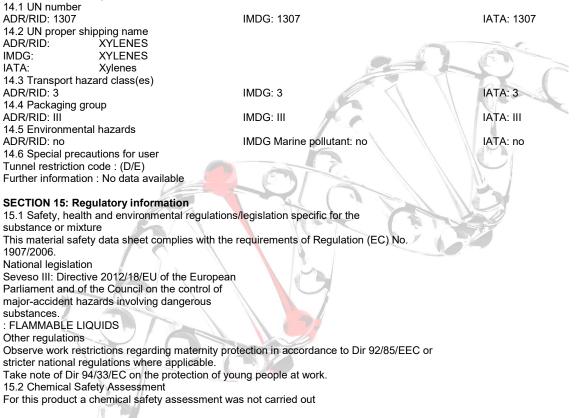
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Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. 12.7 Other adverse effects No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods Product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information



Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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