## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name : *p*-Xylene

CAS-No. : 106-42-3

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

### 1.3 Details of the supplier of the safety data sheet

Distributor : Continental Industries Group, Inc.
733 Third Avenue Fl. 20
New York, NY 10017
USA

Telephone : Tel: 212-752-2020

### 1.4 Emergency telephone number

Chemtel Phone # : 1-800-255-3924
International Phone # : +01-813-248-0585
Contract # : MIS0001728

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**
Flammable liquids (Category 3), H226
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Skin irritation (Category 2), H315
Acute aquatic toxicity (Category 2), H401

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

### 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Warning

Hazard statement(s)

| | |
|---|---|
| H226 | Flammable liquid and vapour. |
| H312 + H332 | Harmful in contact with skin or if inhaled |
| H315 | Causes skin irritation. |
| H401 | Toxic to aquatic life. |

Precautionary statement(s)

| | |
|---|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment. |

| | |
|---|---|
| P241 | Use explosion-proof electrical/ ventilating/ lighting/ equipment. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P261 | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. |
| P264 | Wash skin thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/ eye protection/ face protection. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340 + P312 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. |
| P332 + P313 | If skin irritation occurs: Get medical advice/ attention. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P370 + P378 | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS** - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

Synonyms : 1,4-Dimethylbenzene

Formula : $C_8H_{10}$
Molecular weight : 106.17 g/mol
CAS-No. : 106-42-3
EC-No. : 203-396-5
Index-No. : 601-022-00-9

**Hazardous components**

| Component | Classification | Concentration |
|---|---|---|
| **p-Xylene** | | |
| | Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; Aquatic Acute 2; H226, H312 + H332, H315, H401 | <= 100 % |

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

## 4. FIRST AID MEASURES

**4.1 Description of first aid measures**

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

**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.

**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

## 5. FIREFIGHTING MEASURES

**5.1 Extinguishing media**

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**
Carbon oxides

**5.3 Advice for firefighters**
Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**
Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

**6.2 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.

**6.3 Methods and materials for containment and cleaning up**
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).

**6.4 Reference to other sections**
For disposal see section 13.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling**
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Flammable liquids

**7.3 Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**

**Components with workplace control parameters**

| Component | CAS-No. | Value | Control parameters | Basis |
|---|---|---|---|---|
| p-Xylene | 106-42-3 | TWA | 100.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | Remarks | Eye & Upper Respiratory Tract irritation<br>Central Nervous System impairment<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section) | | |

| | | | | |
|---|---|---|---|---|
| | | Not classifiable as a human carcinogen | | |
| | | STEL | 150.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Eye & Upper Respiratory Tract irritation<br>Central Nervous System impairment<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Not classifiable as a human carcinogen | | |
| | | ST | 150.000000 ppm<br>655.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | TWA | 100.000000 ppm<br>435.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | TWA | 100.000000 ppm<br>435.000000 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| | | The value in mg/m3 is approximate. | | |
| | | TWA | 100.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Central Nervous System impairment<br>Upper Respiratory Tract irritation<br>Eye irritation<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Not classifiable as a human carcinogen | | |
| | | STEL | 150.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Central Nervous System impairment<br>Upper Respiratory Tract irritation<br>Eye irritation<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Not classifiable as a human carcinogen | | |
| | | TWA | 100 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Central Nervous System impairment<br>Upper Respiratory Tract irritation<br>Eye irritation<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Not classifiable as a human carcinogen | | |
| | | STEL | 150 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Central Nervous System impairment<br>Upper Respiratory Tract irritation<br>Eye irritation<br>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)<br>Not classifiable as a human carcinogen | | |
| | | TWA | 100 ppm<br>435 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| | | The value in mg/m3 is approximate. | | |

**Biological occupational exposure limits**

| Component | CAS-No. | Parameters | Value | Biological specimen | Basis |
|---|---|---|---|---|---|
| p-Xylene | 106-42-3 | Methylhippuric acids | 1.5g/g creatinine | Urine | ACGIH - Biological Exposure Indices (BEI) |
| | Remarks | End of shift (As soon as possible after exposure ceases) | | | |
| | | Methylhippuric acids | 1,500.0000 mg/g | Urine | ACGIH - Biological Exposure Indices (BEI) |
| | | End of shift (As soon as possible after exposure ceases) | | | |

## 8.2 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**
Face shield and safety glasses 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.

Full contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

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)

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 CE 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**
Complete suit protecting against chemicals, 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 respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| a) | Appearance | Form: liquid, clear<br>Colour: colourless |
| b) | Odour | No data available |
| c) | Odour Threshold | No data available |
| d) | pH | No data available |
| e) | Melting point/freezing point | Melting point/range: 12 - 13 °C (54 - 55 °F) - lit. |
| f) | Initial boiling point and boiling range | 138 °C (280 °F) - lit. |
| g) | Flash point | 25.0 °C (77.0 °F) - closed cup |
| h) | Evaporation rate | No data available |
| i) | Flammability (solid, gas) | No data available |
| j) | Upper/lower flammability or explosive limits | Upper explosion limit: 7 %(V)<br>Lower explosion limit: 1.1 %(V) |
| k) | Vapour pressure | 21.3 hPa (16.0 mmHg) at 37.7 °C (99.9 °F)<br>12.0 hPa (9.0 mmHg) at 20.0 °C (68.0 °F) |
| l) | Vapour density | No data available |
| m) | Relative density | 0.861 g/cm3 at 20 °C (68 °F) |
| n) | Water solubility | 0.2 g/l |
| o) | Partition coefficient: n-octanol/water | log Pow: 3.15 |
| p) | Auto-ignition temperature | 529.0 °C (984.2 °F) |
| q) | Decomposition temperature | No data available |
| r) | Viscosity | No data available |
| s) | Explosive properties | No data available |
| t) | Oxidizing properties | No data available |

### 9.2 Other safety information

| | |
|---|---|
| Surface tension | 28.3 mN/m at 20.0 °C (68.0 °F) |

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity
No data available

### 10.2 Chemical stability
Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

### 10.4 Conditions to avoid
Heat, flames and sparks.

### 10.5 Incompatible materials
Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity**
LD50 Oral - Rat - 5,000 mg/kg

LD50 Oral - Rat - male - 3,523 mg/kg

LC50 Inhalation - Rat - 4 h - 4550 ppm
Remarks: Lungs, Thorax, or Respiration:Chronic pulmonary edema. Liver:Other changes. Blood:Changes in cell count (unspecified).

No data available

**Skin corrosion/irritation**
Skin - Rabbit
Result: Moderate skin irritation - 4 h

**Serious eye damage/eye irritation**
No data available

**Respiratory or skin sensitisation**
No data available

**Germ cell mutagenicity**
No data available

**Carcinogenicity**

| | |
|---|---|
| IARC: | 3 - Group 3: Not classifiable as to its carcinogenicity to humans (p-Xylene) |
| NTP: | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |
| OSHA: | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |

**Reproductive toxicity**
No data available

May cause reproductive disorders.

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Additional Information**
RTECS: ZE2625000

narcosis, Lung irritation, chest pain, pulmonary edema, Central nervous system depression, Gastrointestinal disturbance, Liver injury may occur., Kidney injury may occur., Blood disorders

Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

| | |
|---|---|
| Toxicity to fish | LC50 - Oncorhynchus mykiss (rainbow trout) - 2.60 mg/l - 96 h |
| | LC50 - Carassius auratus (goldfish) - 18.00 mg/l - 24 h |

| | |
|---|---|
| Toxicity to daphnia and other aquatic invertebrates | EC50 - Daphnia magna (Water flea) - 35.50 - 63.10 mg/l - 48 h |
| Toxicity to algae | EC50 - Pseudokirchneriella subcapitata (green algae) - 3.20 - 4.40 mg/l - 72 h |

**12.2 Persistence and degradability**

Biodegradability Result: 87.8 % - Readily biodegradable

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

## 13. DISPOSAL CONSIDERATIONS

**13.1 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. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**

UN number: 1307 Class: 3 Packing group: III
Proper shipping name: Xylenes
Reportable Quantity (RQ): 100 lbs

Poison Inhalation Hazard: No

**IMDG**

UN number: 1307 Class: 3 Packing group: III EMS-No: F-E, S-D
Proper shipping name: XYLENES

**IATA**

UN number: 1307 Class: 3 Packing group: III
Proper shipping name: Xylenes

## 15. REGULATORY INFORMATION

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

| | CAS-No. | Revision Date |
|---|---|---|
| p-Xylene | 106-42-3 | 2007-07-01 |

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| p-Xylene | 106-42-3 | 2007-07-01 |

**Pennsylvania Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| p-Xylene | 106-42-3 | 2007-07-01 |

**New Jersey Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| p-Xylene | 106-42-3 | 2007-07-01 |

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|---|---|
| Acute Tox. | Acute toxicity |
| Aquatic Acute | Acute aquatic toxicity |
| Flam. Liq. | Flammable liquids |
| H226 | Flammable liquid and vapour. |
| H312 | Harmful in contact with skin. |
| H312 + H332 | Harmful in contact with skin or if inhaled |
| H315 | Causes skin irritation. |
| H332 | Harmful if inhaled. |

**HMIS Rating**

| | |
|---|---|
| Health hazard: | 1 |
| Chronic Health Hazard: | * |
| Flammability: | 3 |
| Physical Hazard | 0 |

**NFPA Rating**

| | |
|---|---|
| Health hazard: | 1 |
| Fire Hazard: | 3 |
| Reactivity Hazard: | 0 |

**Further information**

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. Continental Industries Group, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.