

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : *p*-Xylene  
Product Number : 95682  
Brand : Sigma-Aldrich  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,4-Dimethylbenzene  
Formula : C<sub>8</sub>H<sub>10</sub>  
Molecular Weight : 106.17 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>p-Xylene</b>			
106-42-3	203-396-5	601-022-00-9	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Flammable Liquid, Irritant, Reproductive hazard

##### Target Organs

Nerves., Liver, Kidney

#### HMIS Classification

Health Hazard: 2  
Chronic Health Hazard: \*  
Flammability: 3  
Physical hazards: 0

#### NFPA Rating

Health Hazard: 2  
Fire: 3  
Reactivity Hazard: 0

#### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.

#### 4. 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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

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

#### 5. FIRE-FIGHTING MEASURES

##### Flammable properties

Flash point 25.0 °C (77.0 °F) - closed cup

Ignition temperature 529 °C (984 °F)

##### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

##### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

##### Further information

Use water spray to cool unopened containers.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions

Use personal protective equipment. Avoid breathing vapors, 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.

##### Environmental precautions

Do not let product enter drains.

##### Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

##### 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.

**Storage**

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

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
p-Xylene	106-42-3	TWA	434 mg/m <sup>3</sup>	1996-05-18	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
Remarks	The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . Substances for which there is a Biological Exposure Index or Indices. 1996 Adoption Refers to Appendix A -- Carcinogens.				
		STEL	150 ppm 651 mg/m <sup>3</sup>	1996-05-18	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
	The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . Refers to Appendix A -- Carcinogens. Substances for which there is a Biological Exposure Index or Indices. 1996 Adoption				
		TWA	100 ppm 435 mg/m <sup>3</sup>	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.
		TWA	100 ppm 435 mg/m <sup>3</sup>	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A

		STEL	150 ppm 655 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
		TWA	100 ppm 434 mg/m3	1996-05-18	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . Substances for which there is a Biological Exposure Index or Indices Refers to Appendix A -- Carcinogens. 1996 Adoption					
		STEL	150 ppm 651 mg/m3	1996-05-18	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . Substances for which there is a Biological Exposure Index or Indices 1996 Adoption Refers to Appendix A -- Carcinogens.					

### Personal protective equipment

#### 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).

#### Hand protection

Handle with gloves.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**

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

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form liquid, clear  
Colour colourless

**Safety data**

pH no data available  
Melting point 12 - 13 °C (54 - 55 °F)  
Boiling point 138 °C (280 °F)  
Flash point 25.0 °C (77.0 °F) - closed cup  
Ignition temperature 529 °C (984 °F)  
Lower explosion limit 1.1 %(V)  
Upper explosion limit 7 %(V)  
Vapour pressure 21.3 hPa (16.0 mmHg) at 37.7 °C (99.9 °F)  
12.0 hPa (9.0 mmHg) at 20.0 °C (68.0 °F)  
Density 0.861 g/mL at 20 °C (68 °F)  
Water solubility 0.2 g/l  
Partition coefficient: log Pow: 3.15  
n-octanol/water

**10. STABILITY AND REACTIVITY****Storage stability**

Stable under recommended storage conditions.

**Conditions to avoid**

Heat, flames and sparks.

**Materials to avoid**

Strong oxidizing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Hazardous reactions**

Vapours may form explosive mixture with air.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - rat - 5,000 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).

**Irritation and corrosion**

no data available

### **Sensitisation**

no data available

### **Chronic exposure**

IARC: Group 3 - Not classifiable as to 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.

May cause reproductive disorders.

### **Signs and Symptoms of Exposure**

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

### **Potential Health Effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
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<b>Eyes</b>	Causes eye irritation.
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<b>Target Organs</b>	Nerves., Liver, Kidney,

### **Additional Information**

RTECS: ZE2625000

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## **12. ECOLOGICAL INFORMATION**

### **Elimination information (persistence and degradability)**

no data available

### **Ecotoxicity effects**

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

### **Further information on ecology**

no data available

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## **13. DISPOSAL CONSIDERATIONS**

### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. 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  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

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

**IATA**

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

**15. REGULATORY INFORMATION****OSHA Hazards**

Flammable Liquid, Irritant, Reproductive hazard

**DSL Status**

All components of this product are on the Canadian DSL list.

**SARA 302 Components**

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

**SARA 313 Components**

	CAS-No.	Revision Date
p-Xylene	106-42-3	1987-01-01

**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	1987-01-01

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
p-Xylene	106-42-3	1987-01-01

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
p-Xylene	106-42-3	1987-01-01

**California Prop. 65 Components**

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

**16. OTHER INFORMATION****Further information**

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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. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.