

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : *p*-Xylene

Product Number : 134449

Brand : Sigma-Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
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USA

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2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable liquid, Irritant, Reproductive hazard

Target Organs

Nerves., Liver, Kidney

GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H226 Flammable liquid and vapour.
H303 May be harmful if swallowed.
H312 + H332 Harmful in contact with skin or if inhaled.
H315 Causes skin irritation.
H401 Toxic to aquatic life.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing.

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

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,4-Dimethylbenzene

Formula : C₈H₁₀

Molecular Weight : 106.17 g/mol

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

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

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.

5. FIRE-FIGHTING MEASURES

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

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

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).

7. HANDLING AND STORAGE

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.

Conditions for safe storage

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. 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	100 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		STEL	150 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		TWA	100 ppm 435 mg/m3	1993-06-30	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	100 ppm 435 mg/m3	1989-03-01	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	150 ppm 655 mg/m3	1989-03-01	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	100 ppm 434 mg/m3	1996-05-18	USA. ACGIH Threshold Limit Values (TLV)
	Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories. 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	USA. ACGIH Threshold Limit Values (TLV)
	Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories. 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. 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.

Eye 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 and 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.

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) - lit.
Boiling point	138 °C (280 °F) - lit.
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/cm ³ at 20 °C (68 °F)
Water solubility	0.2 g/l
Partition coefficient: n-octanol/water	log Pow: 3.15

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapours may form explosive mixture with air.

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

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).

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (p-Xylene)

3 - Group 3: Not classifiable as to its carcinogenicity to humans (p-Xylene)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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 (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

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

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

Additional Information

RTECS: ZE2625000

12. ECOLOGICAL INFORMATION**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

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

no data available

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. 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
 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

p-Xylene

CAS-No.
106-42-3Revision Date
2007-07-01**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

p-Xylene

CAS-No.
106-42-3Revision Date
2007-07-01**Pennsylvania Right To Know Components**

p-Xylene

CAS-No.
106-42-3Revision Date
2007-07-01**New Jersey Right To Know Components**

p-Xylene

CAS-No.
106-42-3Revision Date
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**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.
