Material Safety Data Sheet

Version 3.0
Revision Date 12/28/2008
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : *p*-Xylene

Product Number : 95685
Brand : Fluka

Company : Sigma-Aldrich Canada, Ltd
2149 Winston Park Drive
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CANADA
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,4-Dimethylbenzene

Formula : C_8H_{10}
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	-

3. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Nerves., Liver, Kidney

WHMIS Classification

B2	Flammable Liquid	Flammable Liquid
D2A		Reproductive hazard
D2B		Moderate skin irritant

HMIS Classification

Health Hazard: 2
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 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.

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	STEL	150 ppm 651 mg/m3	2004-04-30	Canada. Occupational Health and Safety Code 218
		TWA	100 ppm 434 mg/m3	2004-04-30	Canada. Occupational Health and Safety Code 218
		TWA	100 ppm 434 mg/m3	2000-01-12	Canada. Act Respecting Occupational Health and Safety [R.S.Q., c.2.1], Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14
		STEL	150 ppm 651 mg/m3	2000-01-12	Canada. Act Respecting Occupational Health and Safety [R.S.Q., c.2.1], Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14
		TWA	100 ppm 435 mg/m3	2005-02-03	Canada. Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851),139
		STEL	150 ppm 650 mg/m3	2005-02-03	Canada. Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851),139
		TWA	100 ppm	2004-08-01	Canada. Worker's Compensation Act, Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
		STEL	150 ppm	2004-08-01	Canada. Worker's Compensation Act,

					Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
		TWA	100 ppm 434 mg/m3	2004-04-30	Canada. Occupational Health and Safety Code 218
		STEL	150 ppm 651 mg/m3	2004-04-30	Canada. Occupational Health and Safety Code 218

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)

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

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Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.
Target Organs	Nerves., Liver, Kidney,

Additional Information
RTECS: ZE2625000

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

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

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

WHMIS Classification

B2	Flammable Liquid	Flammable Liquid
D2A		Reproductive hazard
D2B		Moderate skin irritant

16. OTHER INFORMATION

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. 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.