



Material Safety Data Sheet

LA1669
Xylene

Revision Date: 02/24/2001

Date of Printing: 04/26/2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: LA1669
Product Name: Xylene
Synonyms: Xylol Dimethylbenzene.
Chemical Family: Hydrocarbon
Application: Chemical intermediate.

Distributed By: Vopak Canada Ltd. Vopak USA.
Van Horne Way 6100 Carillon Point
Richmond, BC Kirkland, WA 98003
V6X 1W5 USA.

Prepared By: The Safety, Health and Environment Department of Vopak Canada Ltd.

Emergency Telephone Number (CHEMTREC): (800) 424-9300

Telephone number for non-emergency questions concerning MSDS(Canada): (604) 303-2565
Vopak USA. Inc. Corporate Office Number: (425) 889-3400

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components:

Ingredients	Percent	LD50s and LC50s Route & Species:
Xylene, Mixture Of Isomers 1330-20-7	60-100	Inhalation LC50 Rat : 5000 ppm/4H Oral LD50 Rat : 4300 mg/kg Dermal LD50 Rabbit : >1700 mg/kg
Ethyl Benzene 100-41-4	10-30	Oral LD50 Rat : 3500 mg/kg Dermal LD50 Rabbit : 17800 uL/kg

Notes: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Vapours are moderately irritating to the eyes.
Skin Contact: Causes moderate skin irritation.

Inhalation: Vapours are moderately irritating to the respiratory passages. The liquid when accidentally aspirated into the lungs can cause severe inflammation of the lung. In rare cases may sensitize heart muscle causing heart arrhythmia. Solvent abusers exposed to high doses of aromatic solvents (e.g. toluene/xylene) show signs of hearing loss as well as damage to the brain, liver and kidney. Excessive exposure during pregnancy may be hazardous to the developing fetus.

Ingestion: Harmful if swallowed.

4. FIRST AID MEASURES

Eye Contact: Flush eyes with water for at least 15 minutes while holding eyelids open. Seek immediate medical attention.

Skin Contact: Flush affected skin with gently flowing water for at least 20 minutes and remove contaminated clothing while rinsing. Wash contaminated skin with mild soap and water for 15 minutes. Obtain medical attention immediately.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Guard against aspiration into lungs by having the individual turn on to their left side. Get immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Notes To Physician: The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Flash Point (C): >24 (F): >75
Flash Point Method: Tag Closed Cup
Autoignition Temperature (C): 527 (F): 980
Flammable Limits in Air - Lower (%): 1.1
Flammable Limits in Air - Upper (%): 7

Extinguishing Media: Dry chemical. Carbon dioxide Foam Water mist

Special Exposure Hazards: Vapour forms a flammable / explosive mixture with air between upper and lower flammable limits. Vapours may travel along ground and flashback along vapour trail may occur. Do not use water except as a fog. Product will float and can be reignited on surface of water. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Always stay away from ends of containers due to explosive potential. Fight fire from maximum distance. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 2, FLAMMABILITY 3 , REACTIVITY 0

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 2, FLAMMABILITY 3 , REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Restrict access to unprotected personnel. Wear appropriate protective equipment.

Environmental Precautionary: Prevent from entering sewers, waterways or low areas. Consult local authorities.

Procedure for Cleaning/Absorption: Eliminate all ignition sources. Isolate spill and stop leak where safe. Try to work upwind of spill. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Wear appropriate breathing apparatus (if applicable) and protective clothing. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. For large spills, remove by mechanical means and place in containers. For small spills, collect with non-combustible sorbent. Flush area with water to remove trace residue.

7. HANDLING AND STORAGE

Handling: Flammable. Do not cut, drill, grind, weld or perform similar operations on or near containers. Vapours may accumulate and travel to distant ignition sources and flashback. Empty containers may contain hazardous product residues. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Hot surfaces may be sufficient to ignite liquid even in the absence of sparks or flames. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Do not pressurize drum containers to empty them. Avoid breathing vapours and prolonged or repeated contact with skin. Launder contaminated clothing prior to reuse. Use good personal hygiene. Air-dry contaminated clothing in a well ventilated area before laundering.

Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Use explosion-proof ventilation to prevent vapour accumulation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere. Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. Concentrations in air should be maintained below lower explosive limit at all times or below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). Electrical and mechanical equipment should be explosion-proof. Mechanical ventilation is recommended for all indoor situations to control fugitive emissions.

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airbourne concentrations, use a NIOSH -approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

Gloves: Impervious gloves. Polyvinyl gloves. Viton gloves.

Skin Protection: Impervious gloves (viton, polyvinyl alcohol) should be worn at all times when handling this product. In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn.

Eyes: Chemical safety goggles and or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Hazardous Components:

Ingredients	Percent	ACGIH 2000 - Time Weighted Averages	OSHA - Vacated PELs - Time Weighted Averages
Xylene, Mixture Of Isomers 1330-20-7	60-100	100 ppm TWA	100 ppm TWA; 435 mg/m ³ TWA
Ethyl Benzene 100-41-4	10-30	100 ppm TWA	100 ppm TWA; 435 mg/m ³ TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Colourless
Odor:	Sweet Aromatic Odour
pH:	Not Available.
Specific Gravity:	0.871
Boiling Point (C):	137 - 143 (F): 278 - 289
Freezing Point (C):	>-48 (F): >-54
Vapor Pressure:	>5 mm Hg
Vapor Density:	3.7
% Volatile by Volume:	Not Available.
Evaporation Rate:	0.72
Solubility:	Negligible water solubility. Soluble in organic solvents.
VOCs (lbs/gallon):	Not Available.
Viscosity:	Not Available.
Molecular Weight:	106.2

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Avoid excessive heat, open flames and all ignition sources.
Materials to Avoid:	Strong oxidizing agents.
Hazardous Decomposition Products:	Carbon monoxide. Carbon dioxide.
Additional Information:	Xylene will attack some forms of plastics, rubber and coatings.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion:	Harmful if swallowed.
Skin Contact:	Causes moderate skin irritation.
Inhalation:	Vapours are moderately irritating to the respiratory passages. The liquid when accidentally aspirated into the lungs can cause severe inflammation of the lung. In rare cases may sensitize heart muscle causing heart arrhythmia. Solvent abusers exposed to high doses of aromatic solvents (e.g. toluene/xylene) show signs of hearing loss as well as damage to the brain, liver and kidney. Excessive exposure during pregnancy may be hazardous to the developing fetus.
Eye Contact:	Vapours are moderately irritating to the eyes.
Aggravated Conditions:	Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.
Carcinogenicity Comment:	No additional information available.
Other:	Prolonged exposures to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression. Prolonged and repeated contact with the skin can cause defatting and drying of the skin resulting in skin irritation

and dermatitis.

Acute Test:

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

Primary Irritation Effect: Causes skin and eye irritation. Respiratory disorders.

Carcinogenicity: This product contains ethylbenzene. Ethylbenzene has been shown to cause cancer in laboratory animals. Toxicity tests carried out for chronic effects and mutagenicity have been negative.

Xylene, Mixture Of Isomers 60-100 1330-20-7
IARC - Group 3 (not classifiable) Listed

Ethyl Benzene 10-30 100-41-4
IARC - Group 2B (Possibly carcinogenic) Listed

Hazardous Components:

Ingredients	Percent	ACGIH 2000 - Carcinogens
Xylene, Mixture Of Isomers 1330-20-7	60-100	A4 - Not Classifiable as a Human Carcinogen
Ethyl Benzene 100-41-4	10-30	Not listed.

Genotoxicity: Not Available.

Reproductive/Developmental Not Available.

Toxicity:

Teratogenicity: Not Available.

Embryotoxicity: High exposures to xylene in some animal studies, often at levels toxic to the mother, affected embryo/fetal development. The significance of this finding to humans is not known.

Mutagenicity: Toxicity tests carried out for chronic effects and mutagenicity have been negative.

12. ECOLOGICAL INFORMATION

Mobility: Not Available.

Persistence: Not Available.

Bioaccumulative: Not Available.

Ecotoxicological Information:

Ecotoxicity - Fish Species Data Not Available.

Acute Crustaceans Toxicity: Not Available.

Ecotoxicity - Freshwater Algae Data Not Available.

Chemical Fate Information: Not Available.

Other Information: Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. Spill areas must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method:

Waste management priorities (depending on volumes and concentration of waste) are : 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licensed waste disposal facility. Do not attempt to combust waste on site. Incinerate at a licensed waste disposal site with approval of environmental authority.

Contaminated Packaging:

Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: Xylenes
Hazard Class: 3
UN/NA Number: UN1307
DOT Packing Group: III
DOT Reportable Quantity (lbs): 100
Marine Pollutant: No.

ICAO/IATA:

IATA Proper Shipping Name: Xylenes
IATA Hazard Class: 3
UN/NA Number: UN1307
Packing Group: III
IATA Label: Flammable liquid.
Remarks: No additional remark.

IMDG:

IMDG Proper Shipping Name: Xylenes
Hazard Class: 3
Packing Group: III
EMS No.: 3-07
MFAG Table No.: Not applicable.
Marine Pollutant: No.
IMDG Flash Point (C): 17 - 23
IMDG Label: Flammable liquid.
Remarks: No additional remark.

TDG (Canada):

TDG Proper Shipping Name: Xylenes
Hazard Class: 3
UN Number: UN1307
Packing Group: III
Note: No additional remark.
Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: Listed.
Canadian DSL Inventory Status: Listed.
Canadian NDSL Inventory Status: Not Listed.

U.S. Regulatory Rules

Xylene, Mixture Of Isomers 60-100 1330-20-7

CERCLA/SARA - Section 302: Not Listed.
SARA (311, 312) Hazard Class: Listed
CERCLA/SARA - Section 313: Listed

Ethyl Benzene 10-30 100-41-4

CERCLA/SARA - Section 302: Not Listed.
SARA (311, 312) Hazard Class: Listed
CERCLA/SARA - Section 313: Listed

California Proposition 65: Not Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List: Listed.

Pennsylvania Right to Know List: Listed.

Canada - WHMIS Classification: B2 FLAMMABLE LIQUIDS
D2A VERY TOXIC MATERIALS
D2B TOXIC MATERIALS



16. OTHER INFORMATION

The following sections have been revised: Nothing has been revised.

Additional Information: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer: NOTICE TO READER:
Vopak, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Vopak Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Vopak makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Vopak's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

*****END OF MSDS*****