



Effective Date: 01/02/14  
Replaces Revision: 01/01/2012

NON-EMERGENCY TELEPHONE  
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE  
800-424-9300

## SDS – SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** XYLENES

**Synonyms:** Dimethyl Benzene, Xylol, Methyltoluene

**Chemical Formula:** C<sub>6</sub>H<sub>4</sub>(CH<sub>3</sub>)<sub>2</sub>

**Recommended Use of the Chemical and Restrictions On Use:** Laboratory Reagent

**Manufacturer / Supplier:** Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

**Emergency Phone Number:** 24-Hour Chemtrec Emergency Telephone 800-424-9300

### 2. Hazard(s) Identification

**Classification of the Substance or Mixture:**

Flammable liquids (Category 3)

Acute toxicity, Oral (Category 5)

Acute toxicity, Inhalation (Category 4)

Acute toxicity, Dermal (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2B)

Acute aquatic toxicity (Category 2)

**Risk Phrases:**

R10: Flammable.

R20/21: Harmful by inhalation and in contact with skin.

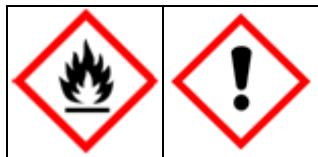
R36/38: Irritating to eyes and skin.

R51: Toxic to aquatic organisms.

**Label Elements:**

**Trade Name:** XYLENES

**Signal Word:** Warning



**Hazard Statements:**

H226: Flammable liquid and vapor.

H303: May be harmful if swallowed.

H312 + H332: Harmful in contact with skin or if inhaled.

H315 + H320: Causes skin and eye irritation.

H401: Toxic to aquatic life.

**Precautionary Statements:**

P280: Wear protective gloves/ protective clothing.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 3. Composition / Information on Ingredients

**CAS Number:** 1330-20-7

**EC Number:** 215-535-7

**Index Number:** 601-022-00-9

**Molecular Weight:** 106.17 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
m-Xylene	108-38-3	203-576-3	40 - 65%	Yes	Substance
o-Xylene	95-47-6	202-422-2	15 – 20%	Yes	Substance
p-Xylene	106-42-3	202-849-4	< 20 %	Yes	Substance
Ethyl Benzene	100-41-4	202-849-4	15 – 25%	Yes	Substance

### 4. First-aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Call a physician immediately.

**Ingestion:** Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### 5. Fire-fighting Measures

**Fire:** Flash point: 29C (84F) CC; Autoignition temperature: 464C (867F)

Flammable limits in air % by volume: uel: 7.0 / lel: 1.0

**Explosion:** Above flash point, vapor-air mixtures are explosive within flammable limits noted above. . Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

**Fire Extinguishing Media:** Dry chemical, foam or Carbon Dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

## 6. Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**Environmental Precautions and Methods and Materials for Containment and Cleaning Up:** Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is 800-424-8802.

## 7. Handling and Storage

**Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities:** Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product. Do not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition; they may explode and cause injury or death.

## 8. Exposure Controls / Personal Protection

### Airborne Exposure Limits:

#### Xylene:

- OSHA Permissible Exposure Limit (PEL): 100 ppm (TWA)
- ACGIH Threshold Limit Value (TLV): 100 ppm (TWA); 150 ppm (STEL)
- A4 - Not classifiable as a human carcinogen

#### Ethyl Benzene:

- OSHA Permissible Exposure Limit (PEL): 100 ppm (TWA)
- ACGIH Threshold Limit Value (TLV): 100 ppm (TWA); 125 ppm (STEL)
- A3 - Confirmed animal carcinogen with unknown relevance to humans

**Ventilation System:** A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details. Use explosion-proof equipment.

**Personal Respirators (NIOSH Approved):** If the exposure limit is exceeded and engineering controls are not feasible, a half face piece organic respirator may be worn up to 10 times (10X) the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece organic respirator may be worn up to 50 times (50X) the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in Oxygen-deficient atmospheres.

**Skin Protection:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:** Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

**Appearance:** Clear, colorless liquid

**Odor:** Characteristic odor

**Odor Threshold:** Not determined

**pH:** Not available

**% Volatiles by volume @ 21C (70F):** 100

**Melting Point:** -25C (-13F)

**Boiling Point / Boiling Range:** 137 - 140C (279 - 284F)

**Flash Point:** 29C (84F) CC

**Evaporation Rate (BuAC=1):** 0.7

**Flammability:** Flammable

**Upper / Lower Flammability or Explosive Limits:** Upper – 7.0 / Lower – 1.0

**Vapor Pressure (mm Hg):** 8 @ 20C (68F)

**Vapor Density (Air=1):** 3.7

**Relative Density:** 0.86 g/mL at 25C (77F)

**Solubility:** Insoluble in water

**Partition Coefficient: n-octanol / water:** Not determined

**Auto-ignition Temperature:** 464C (867F)

**Decomposition Temperature:** Not determined

**Viscosity:** Not determined

## 10. Stability and Reactivity

**Reactivity and / or Chemical Stability:** Stable under ordinary conditions of use and storage.

**Possibility of Hazardous Reactions and Conditions to Avoid:** Heat, flames, ignition sources and incompatibles.

**Incompatible Materials:** Strong oxidizing agents and strong acids.

**Hazardous Decomposition Products:** Carbon Monoxide and unidentified organic components may form when heated to decomposition.

## 11. Toxicological Information

**Emergency Overview:** DANGER! HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES SEVERE EYE IRRITATION. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CHRONIC EXPOSURE CAN CAUSE ADVERSE LIVER, KIDNEY, AND BLOOD EFFECTS. FLAMMABLE LIQUID AND VAPOR.

### Potential Health Effects:

**Inhalation:** Inhalation of vapors may be irritating to the nose and throat. Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties which may be delayed in onset. Substernal pain, cough, and hoarseness are also reported. High vapor concentrations are anesthetic and central nervous system depressants.

**Ingestion:** Ingestion causes burning sensation in mouth and stomach, nausea, vomiting and salivation. Minute amounts aspirated into the lungs can produce a severe hemorrhagic pneumonitis with severe pulmonary injury or death.

**Skin Contact:** Skin contact results in loss of natural oils and often results in a characteristic dermatitis. May be absorbed through the skin.

**Eye Contact:** Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.

**Chronic Exposure:** Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Repeated or prolonged skin contact may cause a skin rash. Repeated exposure of the eyes to high concentrations of vapor may cause reversible eye damage. Repeated exposure can damage bone marrow, causing low blood cell count. May damage the liver and kidneys.

**Aggravation of Pre-existing Conditions:** Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

**Reproductive Toxicity:** May cause teratogenic effects.

**Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:)** No data available.

**Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:)** No data available.

**Numerical Measures of Toxicity:** Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
m-Xylene (108-38-3)	No	No	3
o-Xylene (95-47-6)	No	No	3
p-Xylene (106-42-3)	No	No	3
Ethyl Benzene (100-41-4)	No	No	2B

**Acute Toxicity:**

Xylene:

Oral rat LD50: 4300 mg/kg; Inhalation rat LC50: 5000 ppm / 4 h

Skin rabbit LD50: > 1700 mg/kg

Irritation, standard Draize, skin, rabbit, 500 mg / 24 h moderate

Irritation, standard Draize, eye, rabbit, 87 mg / mild

Investigated as a tumorigen, mutagen, reproductive effector.

Ethyl Benzene:

Oral rat LD50: 3500 mg/kg

Skin rabbit LD50: 17800 ul/kg

Investigated as a tumorigen, mutagen, reproductive effector.

## 12. Ecological Information

The following data is for Xylene.

**Ecotoxicity:** This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

**Persistence and Degradability:** When released into the soil and / or water, this material may biodegrade to a moderate extent. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals.

**Bioaccumulative Potential:** This material is not expected to significantly bioaccumulate (mixed xylenes: octanol / water partition coefficient 3.1 - 3.2; bioconcentration factor = 1.3, eels.)

**Mobility in Soil:** When released into the soil, this material is expected to leach into groundwater.

**Other adverse effects:** When released into the soil, this material may evaporate to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into the air, this material is expected to have a half-life of less than 1 day.

## 13. Disposal Considerations

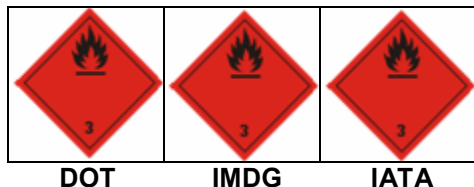
Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

UN Number: UN1307

UN Proper Shipping Name: RQ, XYLENES

Packing Group: III



Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Transport Hazard Class(es): 3

Maritime Transport IMDG/GGVSea

Transport Hazard Class(es): 3

EMS-No: F-E, S-D

Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR

Transport Hazard Class(es): 3

Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not Applicable

Special Precautions for User: No additional information

## 15. Regulatory Information

### Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
m-Xylene (108-38-3)	Yes	Yes	Yes	Yes
o-Xylene (95-47-6)	Yes	Yes	Yes	Yes
p-Xylene (106-42-3)	Yes	Yes	Yes	Yes
Ethyl Benzene (100-41-4)	Yes	Yes	Yes	Yes

### Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
m-Xylene (108-38-3)	Yes	Yes	No	Yes
o-Xylene (95-47-6)	Yes	Yes	No	Yes
p-Xylene (106-42-3)	Yes	Yes	No	Yes
Ethyl Benzene (100-41-4)	Yes	Yes	No	Yes

### Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
m-Xylene (108-38-3)	No	No	Yes	No
o-Xylene (95-47-6)	No	No	Yes	No
p-Xylene (106-42-3)	No	No	Yes	No
Ethyl Benzene (100-41-4)	No	No	Yes	No

**Federal, State & International Regulations - Part 2**

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
m-Xylene (108-38-3)	1000	No	No
o-Xylene (95-47-6)	1000	No	No
p-Xylene (106-42-3)	100	No	Yes
Ethyl Benzene (100-41-4)	1000	No	No

<b>Chemical Weapons Convention:</b> No		<b>TSCA 12(b):</b> No		<b>CDTA:</b> Yes
<b>SARA 311/312:</b>	<b>Acute:</b> Yes	<b>Chronic:</b> Yes	<b>Fire:</b> Yes	<b>Pressure:</b> No
<b>Reactivity:</b> No		Mixture / Liquid		

**16. Other Information**

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO PURITAN PRODUCTS AT THIS TIME. WHILE BELIEVED TO BE ACCURATE, PURITAN PRODUCTS DOES NOT CLAIM IT TO BE ALL INCLUSIVE. IT IS PROVIDED INDEPENDENT OF ANY SALE OF THE PRODUCT, FOR THE PURPOSE OF HAZARD COMMUNICATION, AND AS A GUIDE FOR THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY PROPERLY TRAINED INDIVIDUALS. IT IS NOT INTENDED TO PROVIDE PRODUCT PERFORMANCE OR APPLICABILITY INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, THE UNDERLYING PRODUCT DATA, OR THE INFORMATION CONTAINED HEREIN.

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