

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** XYLENES

**Other means of identification**

**Product No.:** X516, 8802, 8668, 8664, 9516, 9493, 9490, 5377, 9483

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Details of the supplier of the safety data sheet**

**Manufacturer**

**Company Name:** Avantor Performance Materials, Inc.  
**Address:** 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

**Telephone:** Customer Service: 855-282-6867

**Fax:** 610-573-2610  
**Contact Person:** Environmental Health & Safety  
**E-mail:** info@avantormaterials.com

**Emergency telephone number:**

CHEMTREC: 1-800-424-9300 within US and Canada  
CHEMTREC: 1-703-527-3887 outside US and Canada

## 2. Hazard(s) identification

**Hazard Classification**

**Physical Hazards**

Flammable liquids Category 3

**Health Hazards**

Acute toxicity (Dermal) Category 4  
Acute toxicity (Inhalation - vapor) Category 4  
Skin Corrosion/Irritation Category 2  
Serious Eye Damage/Eye Irritation Category 2A  
Carcinogenicity Category 2  
Specific Target Organ Toxicity - Single Exposure Category 3  
Specific Target Organ Toxicity - Repeated Exposure Category 1  
Aspiration Hazard Category 1

**Unknown toxicity - Health**

Acute toxicity, oral	0.08 %
Acute toxicity, dermal	0.08 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

**Environmental Hazards**

Acute hazards to the aquatic environment

Category 2

**Unknown toxicity - Environment**

Acute hazards to the aquatic environment	0.07 %
Chronic hazards to the aquatic environment	100 %

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Flammable liquid and vapor.  
Harmful if swallowed, in contact with skin or if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
Suspected of causing cancer.  
Causes damage to organs through prolonged or repeated exposure.  
Toxic to aquatic life.

**Precautionary Statement**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling.

**Response:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

**Other hazards which do not result in GHS classification:** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

**3. Composition/information on ingredients**

**Mixtures**

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
XYLENES		1330-20-7	60 - 100%
ETHYL BENZENE		100-41-4	15 - 40%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
<b>Ingestion:</b>	Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if symptoms persist.
<b>Skin Contact:</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

#### Most important symptoms/effects, acute and delayed

**Symptoms:** Irritating to eyes, respiratory system and skin.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** Treat symptomatically. Symptoms may be delayed.

#### 5. Fire-fighting measures

**General Fire Hazards:** Flammable liquid and vapor. In case of fire and/or explosion do not breathe fumes.

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Water spray, fog, CO<sub>2</sub>, dry chemical, or alcohol resistant foam.

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Heat may cause the containers to explode. Prevent buildup of vapors or gases to explosive concentrations.

#### Special protective equipment and precautions for firefighters

**Special fire fighting procedures:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures:</b>	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment.
<b>Methods and material for containment and cleaning up:</b>	Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal. Take precautionary measures against static discharges. Use only non-sparking tools. Stop leak if possible without any risk.
<b>Notification Procedures:</b>	Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
<b>Environmental Precautions:</b>	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

## 7. Handling and storage

<b>Precautions for safe handling:</b>	Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe mist or vapor. Use only with adequate ventilation. Avoid contact with eyes. Avoid contact with skin.
<b>Conditions for safe storage, including any incompatibilities:</b>	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Store in a well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
XYLENES	TWA	100 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	150 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm 435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm 435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm 435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	100 ppm 435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	100 ppm 435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
STEL	150 ppm 655 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)	
ETHYL BENZENE	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)

	REL	100 ppm	435 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	125 ppm	545 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	100 ppm	435 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	100 ppm	435 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	125 ppm	545 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	30 ppm	130 mg/m <sup>3</sup>	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2013)
	TWA PEL	5 ppm	22 mg/m <sup>3</sup>	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2013)

### Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
XYLENES (Methylhippuric acids: Sampling time: End of shift.)	1.5 g/g (Creatinine in urine)	ACGIH BEL (03 2013)
ETHYL BENZENE (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.)	0.15 g/g (Creatinine in urine)	ACGIH BEL (02 2014)

### Appropriate Engineering Controls

Use explosion-proof ventilation equipment to stay below exposure limits.

### Individual protection measures, such as personal protective equipment

#### General information:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

#### Eye/face protection:

Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.

#### Skin Protection

##### Hand Protection:

Chemical resistant gloves

##### Other:

Wear suitable protective clothing.

#### Respiratory Protection:

In case of inadequate ventilation use suitable respirator.

#### Hygiene measures:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Provide eyewash station and safety shower. Wash hands before breaks and immediately after handling the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse.

## 9. Physical and chemical properties

### Appearance

#### Physical state:

liquid

#### Form:

liquid

<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	not applicable
<b>Melting point/freezing point:</b>	-41.5 °C
<b>Initial boiling point and boiling range:</b>	139 °C
<b>Flash Point:</b>	29 °C
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	7 %(V)
<b>Flammability limit - lower (%):</b>	1 %(V)
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	1.1 kPa
<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	0.86 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Insoluble in water
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	464 °C
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizing agents. Strong acids.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion:</b>	May be harmful if swallowed.
<b>Inhalation:</b>	Harmful if inhaled.
<b>Skin Contact:</b>	Harmful in contact with skin. Causes skin irritation.
<b>Eye contact:</b>	Causes serious eye irritation.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral**

**Product:** ATEmix (Rat): 4,125.89 mg/kg

**Dermal**

**Product:** ATEmix (Rabbit): 1,358.02 mg/kg

**Inhalation**

**Product:** No data available.

**Specified substance(s):**

XYLENES  
LC 50 (Rat, 4 h): 6,350 mg/l  
LC Lo (Rat, 4 h): 8,000 mg/l

**Repeated dose toxicity**

**Product:** None known.

**Skin Corrosion/Irritation**

**Product:** Causes skin irritation.

**Serious Eye Damage/Eye Irritation**

**Product:** Causes serious eye irritation.

**Respiratory or Skin Sensitization**

**Product:** Not a skin sensitizer.

**Carcinogenicity**

**Product:** Suspected of causing cancer.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

ETHYL BENZENE Overall evaluation: 2B. Possibly carcinogenic to humans.

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive toxicity**

**Product:** May damage fertility or the unborn child.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** Narcotic effect. Respiratory tract irritation.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** Central nervous system. Lungs. auditory organs

**Aspiration Hazard**

**Product:** May be fatal if swallowed and enters airways.

**Other effects:** None known.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Specified substance(s):

**XYLENES**  
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 10.464 - 13.762 mg/l Mortality  
LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 25.62 - 32.64 mg/l Mortality  
LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 6.7 - 10 mg/l Mortality

**ETHYL BENZENE**  
LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 9.1 - 15.6 mg/l Mortality  
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 93 - 211 mg/l Mortality  
LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): 44 mg/l Mortality

##### Aquatic Invertebrates

**Product:** No data available.

##### Specified substance(s):

**XYLENES**  
LC 50 (Water flea (*Daphnia magna*), 24 h): 150 mg/l Mortality  
LC 50 (Daggerblade grass shrimp (*Palaemonetes pugio*), 96 h): 7.4 mg/l Mortality  
LC 50 (Calanoid copepod (*Diaptomus forbesi*), 96 h): 99.5 mg/l Mortality  
LC 50 (Water flea (*Daphnia magna*), 24 h): > 100 - 1,000 mg/l Mortality

**ETHYL BENZENE**  
EC 50 (Water flea (*Daphnia magna*), 48 h): 1.37 - 4.4 mg/l Intoxication  
EC 50 (Brine shrimp (*Artemia* sp.), 48 h): 3.58 - 9.46 mg/l Intoxication  
LC 50 (Water flea (*Daphnia magna*), 48 h): 10.6 - 17.2 mg/l Mortality  
LC 50 (Brine shrimp (*Artemia* sp.), 48 h): 3.91 - 13.7 mg/l Mortality  
LC 50 (Opossum shrimp (*Americamysis bahia*), 24 h): > 5.2 mg/l Mortality

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

#### Persistence and Degradability

##### Biodegradation

**Product:** There are no data on the degradability of this product.

##### BOD/COD Ratio

**Product:** No data available.

#### Bioaccumulative Potential

##### Bioconcentration Factor (BCF)

**Product:** No data available on bioaccumulation.



**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Specified substance(s):**

XYLENES Log Kow: 3.12 - 3.20

ETHYL BENZENE Log Kow: 3.15

**Mobility in Soil:** The product is insoluble in water and will spread on the water surface.

**Other Adverse Effects:** Toxic to aquatic life.

**13. Disposal considerations**

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**

UN Number: UN 1307  
 UN Proper Shipping Name: Xylenes  
 Transport Hazard Class(es)  
   Class(es): 3  
   Label(s): 3  
 Packing Group: III  
 Marine Pollutant: Not a Marine Pollutant  
 Special precautions for user: -

**IMDG**

UN Number: UN 1307  
 UN Proper Shipping Name: XYLENES  
 Transport Hazard Class(es)  
   Class(es): 3  
   Label(s): 3  
   EmS No.: F-E, S-D  
 Packing Group: III  
 Marine Pollutant: Not a Marine Pollutant  
 Special precautions for user: -

**IATA**

UN Number: UN 1307  
 Proper Shipping Name: Xylenes  
 Transport Hazard Class(es)  
   Class(es): 3  
   Label(s): 3  
 Marine Pollutant: Not a Marine Pollutant  
 Packing Group: III  
 Special precautions for user: -

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
XYLENES	100 lbs.
ETHYL BENZENE	1000 lbs.
TOLUENE	1000 lbs.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Acute (Immediate)  
Chronic (Delayed)  
Fire

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
XYLENES	100 lbs.
ETHYL BENZENE	1000 lbs.
TOLUENE	1000 lbs.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
XYLENES	10000 lbs
ETHYL BENZENE	10000 lbs
TOLUENE	10000 lbs

**SARA 313 (TRI Reporting)**

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
XYLENES	10000 lbs	25000 lbs.
ETHYL BENZENE	10000 lbs	25000 lbs.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
XYLENES	Reportable quantity: 100 lbs.
ETHYL BENZENE	Reportable quantity: 1000 lbs.
TOLUENE	Reportable quantity: 1000 lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

ETHYL BENZENE	Carcinogenic.
TOLUENE	Developmental toxin.

**US. New Jersey Worker and Community Right-to-Know Act**

<u>Chemical Identity</u>
XYLENES
ETHYL BENZENE

**US. Massachusetts RTK - Substance List**

**Chemical Identity**

XYLENES  
ETHYL BENZENE

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**

XYLENES  
ETHYL BENZENE

**US. Rhode Island RTK**

**Chemical Identity**

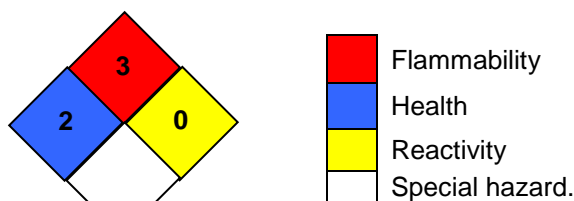
XYLENES  
ETHYL BENZENE

**Inventory Status:**

China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Canada NDSL Inventory:	not applicable
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

<b>Issue Date:</b>	06-24-2016
<b>Revision Date:</b>	No data available.
<b>Version #:</b>	2.0
<b>Further Information:</b>	No data available.

**Disclaimer:**

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