

# Safety Data Sheet

## Xylene

**CAROLINA**<sup>®</sup>  
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### Section 1 Product Description

**Product Name:** Xylene  
**Recommended Use:** Science education applications  
**Synonyms:** Xylol, Dimethylbenzene  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**WARNING**



Flammable liquid and vapor. Causes skin irritation. Suspected of causing cancer. Very toxic to aquatic life.

**GHS Classification:**

Hazardous to the aquatic environment - Acute Category 1, Skin Corrosion/Irritation Category 2, Carcinogenicity Category 2, Flammable Liquid Category 3

**Other Safety Precautions:** IF exposed or concerned: Get medical advice/attention.

**Acute Toxicity Inhalation Vapor Contains** 42 % of the mixture consists of ingredient(s) of unknown toxicity

**Acute Toxicity Inhalation Dust/Mist Contains** 42 % of the mixture consists of ingredient(s) of unknown toxicity

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
m-Xylene	108-38-3	42
Ethylbenzene	100-41-4	21
o-Xylene	95-47-6	19
p-Xylene	106-42-3	18

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.

**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use dry chemical, CO2 or appropriate foam.

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<b>Fire Fighting Methods and Protection:</b>	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
<b>Fire and/or Explosion Hazards:</b>	Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.
<b>Hazardous Combustion Products:</b>	Carbon dioxide, Carbon monoxide

## Section 6 Spill or Leak Procedures

<b>Steps to Take in Case Material Is Released or Spilled:</b>	Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Collect spillage.
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## Section 7 Handling and Storage

<b>Handling:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/.../equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required.
<b>Storage:</b>	Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed in a cool, well-ventilated place.
<b>Storage Code:</b>	Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

## Section 8 Protection Information

<b>Chemical Name</b>	<b>ACGIH</b>		<b>OSHA PEL</b>	
	<b>(TWA)</b>	<b>(STEL)</b>	<b>(TWA)</b>	<b>(STEL)</b>
m-Xylene	100 ppm TWA	150 ppm STEL	100 ppm TWA; 435 mg/m3 TWA	N/A
Ethylbenzene	20 ppm TWA	N/A	100 ppm TWA; 435 mg/m3 TWA	N/A
o-Xylene	100 ppm TWA	150 ppm STEL	100 ppm TWA; 435 mg/m3 TWA	N/A
p-Xylene	100 ppm TWA	150 ppm STEL	100 ppm TWA; 435 mg/m3 TWA	N/A

### Control Parameters

<b>Engineering Measures:</b>	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
<b>Personal Protective Equipment (PPE):</b>	Lab coat, apron, eye wash, safety shower.
<b>Respiratory Protection:</b>	No respiratory protection required under normal conditions of use.
<b>Respirator Type(s):</b>	None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.
<b>Eye Protection:</b>	Wear chemical splash goggles when handling this product. Have an eye wash station available.
<b>Skin Protection:</b>	Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
<b>Gloves:</b>	Nitrile

## Section 9 Physical Data

**Formula:** C<sub>6</sub>H<sub>4</sub>(CH<sub>3</sub>)<sub>2</sub>  
**Molecular Weight:** 106.17 g/mol

**Vapor Pressure:** 88 - 120 hPa at 25 °C  
**Evaporation Rate (BuAc=1):** 0.61

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**Appearance:** Colorless Liquid  
**Odor:** Strong Aromatic  
**Odor Threshold:** 6 mg/m3  
**pH:** No data available  
**Melting Point:** -48 - -13 C  
**Boiling Point:** 138 - 141 C  
**Flash Point:** 29 C  
**Flammable Limits in Air:** 1.0 - 7.0%

**Vapor Density (Air=1):** 3.6  
**Specific Gravity:** 0.86  
**Solubility in Water:** Slightly Soluble  
**Log Pow (calculated):** 2.77 - 3.15  
**Autoignition Temperature:** 465 - 525 C  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** >99%

## Section 10

## Reactivity Data

**Reactivity:** Not generally reactive under normal conditions.  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.  
**Incompatible Materials:** Oxidizing materials  
**Hazardous Decomposition Products:** Carbon dioxide, Carbon monoxide  
**Hazardous Polymerization:** Will not occur

## Section 11

## Toxicity Data

**Routes of Entry:** Inhalation, ingestion, eye or skin contact.  
**Symptoms (Acute):** Central Nervous System Disorders, Respiratory Irritation  
**Delayed Effects:** Central Nervous System Disorders  
 Dermatitis

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
m-Xylene	108-38-3	Oral LD50 Rat 4988 mg/kg	Dermal LD50 Rabbit 14100 UL/KG	INHALATION LC50 CAT 9500 ppm INHALATION LC50 Mouse 5267 ppm
Ethylbenzene	100-41-4	Oral LD50 Rat 3500 mg/kg	Dermal LD50 Rabbit > 5000 mg/kg	INHALATION LC50 Rat 55000 MG/M3 INHALATION LC50 Mouse 35500 MG/M3 INHALATION LC50 Rabbit 4000 ppm
o-Xylene	95-47-6	Oral LD50 Rat 3567 mg/kg		INHALATION LC50 CAT 9500 ppm INHALATION LC50 Mouse 4595 ppm
p-Xylene	106-42-3	Oral LD50 Rat 3910 mg/kg		INHALATION LC50 CAT 9500 ppm

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
m-Xylene	108-38-3	Not listed	Not listed	Not listed
Ethylbenzene	100-41-4	Listed	Not listed	Listed
o-Xylene	95-47-6	Not listed	Not listed	Not listed
p-Xylene	106-42-3	Not listed	Not listed	Not listed

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.

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**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** Central Nervous System, Liver, Respiratory system  
**Chronic:** Respiratory system, Liver, Blood

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** Evaporation into atmosphere, Biodegradation, Adsorbs to soil.  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
m-Xylene	108-38-3	72 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 4.9 MG/L [STATIC]
Ethylbenzene	100-41-4	96 HR LC50 POECILIA RETICULATA 9.6 MG/L [STATIC] 96 HR LC50 LEPOMIS MACROCHIRUS 32 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 1.8 - 2.4 MG/L 96 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA > 438 MG/L
o-Xylene	95-47-6	72 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 4.6 MG/L Aquatic LC50 (96h) Guppy 12 MG/L Aquatic EC50 (48h) Daphnia 3.2 MG/L 72 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 4.7 MG/L [STATIC] 192 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 4.2 MG/L
p-Xylene	106-42-3	Aquatic LC50 (96h) Rainbow Trout 2.6 MG/L 72 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 3.2 MG/L [STATIC] 3 HR EC50 CHLORELLA VULGARIS 105.1 MG/L

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** If discarded, this product is considered a RCRA ignitable waste, D001.

## Section 14 Transport Information

<b>Ground - DOT Proper Shipping Name:</b> UN1307 Xylenes Class 3 P.G. III	<b>Air - IATA Proper Shipping Name:</b> UN1307 Xylenes Class 3 P.G. III
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## Section 15 Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
m-Xylene	108-38-3	m-Xylene	No	1000lb(454kg) final RQ	No	No
Ethylbenzene	100-41-4	Ethylbenzene	1000 lb RQ	1000lb(454kg) final RQ	No	No
o-Xylene	95-47-6	o-Xylene	No	1000lb(454kg) final RQ	No	No
p-Xylene	106-42-3	p-Xylene	No	100lb(45.4kg) final RQ	No	No

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California Prop 65:

WARNING: This product contains a chemical known to the state of California to cause cancer.

## Section 16

## Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health