



**Zeon Chemicals L. P.**

## Material Safety Data Sheet

Form: 256  
Issue Date: 06/07/99  
Supersedes: New  
MSDS Number: Z02699

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

**Manufacturer / Importer:**  
Zeon Chemicals L.P.  
4111 Bells Lane  
Louisville, Kentucky 40211

**Telephone Number:**  
1-800-735-3388  
(502)-775-2000

**Emergency Telephone Number:**  
1-800-776-2460 Ext 7650  
(502) 774-8126

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

**Uses:**  
Electronic Applications

This MSDS applies to the following product(s):

**ZEP-RD**

### Section 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS #	Amount	Exposure Limits	
			OSHA PEL	ACGIH TLV
Xylenes	1330-20-7	>99 %	100 ppm TWA	100 ppm TWA 150 ppm STEL, A4

Other Ingredients	CAS #	Amount	Notes
			TWA = Time Weighted Average TLV = Threshold Limit Value AL = Action Level RD = Respirable Dust TD = Total Dust STEL = Short Term Exposure Limit Skin = Skin contact may be a significant route of exposure A1 = ACGIH confirmed Human Carcinogen A2 = ACGIH Suspected Human Carcinogen A3 = ACGIH Animal Carcinogen A4 = ACGIH Not Classifiable as a Human Carcinogen

### Section 3 - HAZARDS IDENTIFICATION

<b>Emergency Overview:</b>	This material is a clear, colorless thin liquid with a characteristic aromatic solvent odor. Flammable liquid and vapors. Harmful if inhaled, ingested, or absorbed through skin. May produce vapors or mists that can cause eye, skin, and respiratory tract irritation. Prolonged or repeated exposure to vapors may cause drowsiness, nausea, dizziness, or headaches. Toxic combustion products may be released under fire conditions.
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**Potential Health Effects From Overexposure:** Possible routes of entry include skin & eye contact and process vapor or mist inhalation.

Contact with liquid, vapors, or mists may cause moderate to severe irritation or burns to the eyes, skin, nose, throat, and respiratory tract. Inhalation of high vapor or mist concentrations may produce narcotic effects and unconsciousness. Accidental ingestion may cause burning sensation in mouth and stomach, nausea, vomiting, and salivation. Aspiration into the lungs may cause severe pulmonary injury or death. Repeated or prolonged overexposure may cause dermatitis and sensitization in some individuals and damage to the eyes. Repeated exposure may cause effects to the liver, kidneys, and blood. Processing under conditions of inadequate ventilation may produce symptoms of nausea, dizziness, tearing, coughing, or headaches. Typically these effects are reversible upon removal from exposure and no lasting effects are expected. Most importantly, the potential for irritation will depend on the effectiveness of exhaust ventilation provided to the process area.

Xylene is listed by the International Agency for Research on Cancer (IARC) as a Group 3 carcinogen (not classifiable as human carcinogen).

Appropriate precautions should be taken to minimize potential exposure to accidental ingestion, inhalation of process vapors or mists, and skin contact.

Overexposure to decomposition or combustion products may cause irritation of the eyes, skin, and respiratory tract. Symptoms such as coughing, tearing, and irritation should be regarded as potentially hazardous and measures taken to avoid exposure. See Section 10 for information on combustion products.

### Section 4 - FIRST AID MEASURES

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If irritation occurs or persists from any route of exposure, remove the affected individual from the area and seek medical assistance.

**Ingestion:** If swallowed, do not induce vomiting since this material is an aspiration hazard. If vomiting occurs, keep head below hips to prevent aspiration into the lungs. Never give anything by mouth to an unconscious person. Seek medical assistance immediately:

**Eye Contact:** Flush eyes with running water for several minutes while holding eyelids open. Consult a physician if irritation persists.

**Skin Contact:** Remove contaminated clothing. Wash skin with soap and water. Seek medical attention if irritation / allergic skin reaction develops. Launder contaminated clothing before reuse.

**Vapor Inhalation** (processing vapors or decomposition products): Remove the affected individual to fresh air and seek medical assistance immediately. .

### Section 5 - FIRE FIGHTING MEASURES

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**Extinguishing Media:** Carbon dioxide, dry chemical, water fog or alcohol resistant foam is recommended for small fires. For large fires use aqueous foam or water fog. Use water spray or fog to cool fire exposed containers.

**Special Firefighting Procedures:** Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from

any source.

**Unusual Fire and Explosion Hazards:** Flammable liquid and vapors Vapor can flow along surfaces to distant ignition sources and flash back. Closed containers may rupture due to pressure buildup under fire conditions. Toxic gases may be formed upon combustion and represents a hazard to firefighters. See Section 10 for additional information on combustion products.

## Section 6 - ACCIDENTAL RELEASE MEASURES

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Wear respiratory protection and protective clothing, ventilate area, remove all ignition sources, and use non-sparking tools and equipment to contain spill and recover as much as possible. Absorb remaining residue with inert material and place into closed containers to await disposal. Wash spill area with soap and water. Do not allow product to enter municipal sewers or waterways. Spills or releases to the environment may be reportable to the National Response Center (800) 424-8802 and to state and / or local agencies. The CERCLA RQ for Xylene is 100 pounds.

## Section 7 - HANDLING AND STORAGE

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Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing. Store in a well ventilated location away from heat, sparks, flame, and direct sunlight. Keep container closed when not in use. Do not eat, smoke, or drink where this product is handled, processed, or stored. Wash hands thoroughly before eating or smoking. Evaluate transfer operations for potential static charge buildup and ground and bond accordingly. Use non-sparking tools and equipment. Empty containers may retain product residue (liquid and / or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks, open flames, or incompatible materials.

## Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Ventilation:** Enclose operations and / or provide local exhaust ventilation to draw fumes, vapors, or mists away from workers. Ventilation must be adequate to maintain the ambient workplace atmosphere below the limits listed in Section 2.

**Respiratory Protection:** For protection against process vapors or mists, wear a NIOSH approved respirator suitable for the anticipated airborne concentration. Wear a positive pressure air-supplied respirator in situations where there may be potential for elevated airborne exposure.

**Protective Equipment:** During processing operations, splash proof goggles or safety glasses with face shield suitable for keeping liquid material out of the eyes should be worn when potential exists for eye contact. Rubber gloves and apron should be worn when skin contact is anticipated. Provide an eye wash facility and safety shower.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Specific Gravity (H <sub>2</sub> O=1): 0.86	Solubility in Water: Practically Insoluble	% Volatile by Weight: 100
Flash Point: 84° F (29° C)	Vapor Pressure: 8 mm Hg @ 20° C	Vapor Density: 3.7
Boiling Point: 279° F (137° C)	Evaporation Rate: 0.7	Autoignition Temp: 867° F (464° C)
Lower Explosion Limit: 1.0	Upper Explosion Limit: 7.0	

Appearance and Odor: Thin, clear, colorless liquid with a characteristic aromatic solvent odor.

## Section 10 - STABILITY AND REACTIVITY

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Stability: Stable Hazardous Polymerization: Will not occur

**Conditions to Avoid:** Overheating, open flames, sparks, and contact with ignition sources.

**Materials to Avoid:** Strong oxidizing agents and strong acids.

**Hazardous Decomposition Products:** Fumes produced when heated to decomposition temperatures may contain carbon monoxide, carbon dioxide, and aliphatic and aromatic hydrocarbons. Combustion products must be considered toxic.

## Section 11 - TOXICOLOGICAL INFORMATION

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Oral LD<sub>50</sub> (rat) – 4300 mg/kg      Skin LD<sub>50</sub> (rabbit) – >1700 mg/kg      Inhalation LC<sub>50</sub> (rat) – 5000 ppm/4H  
Draize Test – (rabbit): moderate skin irritation 500 mg/24H; mild eye irritation 87 mg  
Kidney, liver, and teratogenic effects have been reported in laboratory tests with animals.

## Section 12 - ECOLOGICAL INFORMATION

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LC<sub>50</sub> (fish) – between 10 and 100 mg/l / 96H  
This material is expected to evaporate and / or biodegrade to a moderate extent if released into the soil. Releases to soil may leach into groundwater. Xylene is expected to evaporate and / or biodegrade to a moderate extent if released to water. In air will react with photochemically produced hydroxyl radicals and become moderately degraded. This material is not expected to significantly bioaccumulate.

## Section 13 - DISPOSAL CONSIDERATIONS

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Waste resulting from this product as supplied is not known to be classified as a hazardous waste per the current listings and characteristics contained in 40 CFR Part 261, and its Appendices. It is the generator's responsibility to determine, per the regulation, the applicability of the Resource Conservation and Recovery Act (RCRA), as well as all state, local, or other governmental agency waste disposal regulations, to the particular waste materials prior to treatment or disposal. Disposal of liquid wastes and solids containing free liquids by land filling is prohibited in most jurisdictions. Incinerate or use biological treatment in accordance with federal, state, and local regulations. Containers of this product may be hazardous when emptied. Empty containers may retain product liquid and vapors.

## Section 14 - TRANSPORTATION INFORMATION

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For domestic transportation purposes, this product is defined or designated as a hazardous material by the U.S. Department of Transportation under Title 49 of the Code of Federal Regulations.

DOT Hazard Class	3
DOT Proper Shipping Name	Xylenes, 3, UN 1307, PG III
DOT Label	Class 3
UN/NA Hazard No.	UN 1307
RQ	100 pounds

## Section 15 - REGULATORY INFORMATION

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**TSCA Inventory Status:** This product and all components are in compliance with the U.S. EPA Toxic Substances Control Act.

**TSCA 12(b) Export Notification Status:** This product does not contain any components subject to export notification requirements.

**SARA 313 Status:** This product contains Xylenes (CASRN 1330-20-7) exceeding the *de minimis* amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.

**Additional Right-to-Know Information on Components:**

Component	CAS #	Key (See below)
Xylenes	1330-20-7	4, 9, 11 *

Key	Description	Key	Description
1.	Reserved	8.	MA Extraordinary Hazardous Substance above 1 ppm
2.	CA Listed Carcinogen	9.	MA Toxic or Hazardous Substance above 1%
3.	CA Listed Reproductive Toxin	10.	NJ Hazardous Substance above 1%
4.	PA Special Hazardous Substance above 0.01%	11.	NJ Special Health Hazard Substance above 0.1%
5.	PA Hazardous Substance above 1%	12.	NJ Environmental Hazardous Substance above 1%
6.	PA Non-Hazardous Substance above 3%	13.	NJ Non-Hazardous Substance above 1%
7.	PA Non-Hazardous Substance above 5%	14.	Canadian WHMIS Ingredient Disclosure List Substance

**Section 16 - ADDITIONAL INFORMATION****Hazard Rating System Classifications:**

	NFPA	HMIS	Key: 0=least; 1=slight; 2=moderate; 3=high; 4=extreme
<b>Health</b>	2	2	National Fire Protection Association rating identifies hazards during a fire emergency.
<b>Flammability</b>	3	3	Hazardous Materials Identification System rating applies to products as packaged.
<b>Reactivity</b>	0	0	

It may be possible under certain processing and handling conditions, e.g. processes that create vapors, mists, or dust, to release unreacted monomers and other substances in airborne concentrations in excess of their established exposure limits or guidelines. Customers and processors should do sufficient in-house industrial hygiene monitoring to assure compliance of their operations.

**Reason for (Re)issue:** New

**User's Responsibility**

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation must be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin must be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

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