## 1. Identification

**Product identifier** | Xylene
---|---
**Other means of identification**

**Product code** | R0000006000

**Recommended use** | Solvent.

**Recommended restrictions** | None known.

**Manufacturer/Importer/Supplier/Distributor information**
Toledo Refining Company, LLC  
1819 Woodville Road  
Oregon, OH 43616

**Telephone number** | 419-698-6600

**Emergency telephone number** | Chemtrec 800-424-9300

## 2. Hazard(s) identification

### Physical hazards
- Flammable liquids - Category 3

### Health hazards
- Acute toxicity, dermal - Category 4
- Acute toxicity, inhalation - Category 4
- Skin corrosion/irritation - Category 2
- Serious eye damage/eye irritation - Category 2
- Carcinogenicity - Category 2
- Reproductive toxicity - Category 2
- Specific target organ toxicity, single exposure - Category 3 respiratory tract irritation
- Specific target organ toxicity, repeated exposure - Category 2 (central nervous system, kidney, liver)
- Aspiration hazard - Category 1

### Environmental hazards
- Hazardous to the aquatic environment, acute hazard - Category 2

### OSHA defined hazards
- Not classified

### Label elements

#### Signal word
- Danger

#### Hazard statement
Flammable liquid and vapor. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs (central nervous system, kidney, liver) 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. 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. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. 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 eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage

Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Xylene</td>
<td>108-38-3</td>
<td>35 - 46</td>
</tr>
<tr>
<td>p-Xylene</td>
<td>106-42-3</td>
<td>10 - 20</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>10 - 19</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>5 - 15</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>0 - 0.5</td>
</tr>
</tbody>
</table>

Composition comments

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

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Provide oxygen, if available, or artificial respiration, if needed. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Get medical attention if irritation develops and persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

Ingestion


Most important symptoms/effects, acute and delayed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Foam. Dry chemical powder. Carbon dioxide (CO2). Water may be an ineffective extinguishing medium.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapor may cause flash fire. Vapor is denser than air – flashback may be possible over considerable distances. The product can accumulate electrostatic charges, which may cause an electrical spark (ignition source).

Special protective equipment and precautions for firefighters

Firefighters must use full bunker gear including NIOSH-approved (or equal), full-face, self-contained breathing apparatus (SCBA) operated in positive pressure mode. Firefighters’ protective clothing will provide only limited protection against liquid contact.
Fire fighting equipment/instructions

Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. Water spray should be used to cool structures and vessels. Use compatible foam to minimize vapor generation as needed. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Water runoff can cause environmental damage.

General fire hazards

Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Extinguish all flames in the vicinity. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Vapors may be controlled using a water fog. Remove with vacuum trucks or pump to storage/salvage vessels. Use explosion proof electric equipment.

Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use clean non-sparking tools to collect absorbed material.

Clean surface thoroughly to remove residual contamination. Retain all contaminated water for removal and treatment.

Environmental precautions

Contain spillages with sand, earth or any suitable adsorbent material. Prevent entry into waterways, sewer, basements or confined areas. Do not allow material to contaminate ground water system. Reporting of releases to appropriate regulatory agencies may be required.

7. Handling and storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Consult with applicable standards such as NFPA 30, 'Flammable and Combustible Liquids Code'. Use only with adequate ventilation. Wear personal protective equipment. Do not breath gas/vapor/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wash thoroughly after handling.

The product is highly flammable, and explosive vapor/air mixtures may be formed. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Keep away from all ignition sources including heat, sparks and flame. Use non-sparking tools and explosion-proof equipment as applicable. This material is a static accumulator. Avoid accumulation of static charges during transfers in metallic systems. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. These alone may be insufficient to remove static electricity. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>PEL</td>
<td>435 mg/m3</td>
</tr>
<tr>
<td>m-Xylene (CAS 108-38-3)</td>
<td>PEL</td>
<td>100 ppm</td>
</tr>
<tr>
<td>o-Xylene (CAS 95-47-6)</td>
<td>PEL</td>
<td>435 mg/m3</td>
</tr>
<tr>
<td>p-Xylene (CAS 106-42-3)</td>
<td>PEL</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>435 mg/m3</td>
</tr>
</tbody>
</table>
### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

### US. OSHA Table Z-2 (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>Ceiling</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td>m-Xylene (CAS 108-38-3)</td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>100 ppm</td>
</tr>
<tr>
<td>o-Xylene (CAS 95-47-6)</td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>100 ppm</td>
</tr>
<tr>
<td>p-Xylene (CAS 106-42-3)</td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>100 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

### US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>STEL</td>
<td>545 mg/m³</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>125 ppm</td>
</tr>
<tr>
<td>m-Xylene (CAS 108-38-3)</td>
<td>STEL</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>150 ppm</td>
</tr>
<tr>
<td>o-Xylene (CAS 95-47-6)</td>
<td>STEL</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>150 ppm</td>
</tr>
<tr>
<td>p-Xylene (CAS 106-42-3)</td>
<td>STEL</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>150 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>STEL</td>
<td>560 mg/m³</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

### Biological limit values

#### ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>0.15 g/g</td>
<td>Sum of mandelic acid and phenylglyoxylic acid</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
<tr>
<td>m-Xylene (CAS 108-38-3)</td>
<td>1.5 g/g</td>
<td>Methylhippuric acids</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
<tr>
<td>o-Xylene (CAS 95-47-6)</td>
<td>1.5 g/g</td>
<td>Methylhippuric acids</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>
ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Xylene (CAS 106-42-3)</td>
<td>1.5 g/g Methylhippuric acids</td>
<td>Creatinine in urine</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>0.3 mg/g o-Cresol, with hydrolysis</td>
<td>Creatinine in urine</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.03 mg/l Toluene</td>
<td>Urine</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.02 mg/l Toluene</td>
<td>Blood</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Toluene (CAS 108-88-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3) Skin designation applies.

Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mist. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses. If splash potential exists, wear full face shield and/or chemical goggles.

Skin protection

Hand protection

Chemical resistant gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other

Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact chemical protective clothing manufacturer for specific information. Flame retardant protective clothing is recommended.

Respiratory protection

Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use. Protection provided by air-purifying respirators is limited and should not be used in atmospheres deficient in oxygen or where airborne concentrations are immediately dangerous to life or health.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical state
Liquid.
Form
Liquid.
Color
Colorless.
Odor
Sweet, Pleasant.
Odor threshold
Not available.
pH
No data
Melting point/freezing point
-53 °F (-47.22 °C)
Initial boiling point and boiling range
278 - 290 °F (136.67 - 143.33 °C)
Flash point
79.0 °F (26.1 °C)
Evaporation rate
Not available.
Flammability (solid, gas)
Not applicable.
Upper/lower flammability or explosive limits
Flammability limit - lower (%)
1.1 %
Flammability limit - upper 6.6 %

Vapor pressure 9 mm Hg @ 25°C

Vapor density Not available.

Relative density 0.87 g/cm³

Solubility(ies)
  Solubility (water) Insoluble

Partition coefficient (n-octanol/water) No data

Auto-ignition temperature 870 °F (465.56 °C)

Decomposition temperature Not available.

Viscosity 0.59 cP

Viscosity temperature 68 °F (20 °C)

Other information
  Percent volatile 100 % by weight

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Strong acids. Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. Inhalation of vapors may cause irritation to respiratory tract.

Skin contact Harmful in contact with skin. Causes skin irritation.

Eye contact Causes serious eye irritation.

Ingestion Swallowing or vomiting of the liquid may result in aspiration into the lungs. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Abdominal pain. Nausea, vomiting. Swallowing or vomiting of the liquid may result in aspiration into the lungs. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Edema.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Harmful if inhaled. Harmful in contact with skin. May cause respiratory irritation.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>8000 mg/l, 4 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>2.6 g/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Causes serious eye irritation.</td>
<td></td>
</tr>
</tbody>
</table>

Respiratory or skin sensitization No data available.
Skin sensitization  No data available.
Germ cell mutagenicity  No data available.
Carcinogenicity  Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

<table>
<thead>
<tr>
<th>Compound</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>2B Possibly carcinogenic to humans.</td>
</tr>
<tr>
<td>m-Xylene (CAS 108-38-3)</td>
<td>3 Not classifiable as to carcinogenicity to humans.</td>
</tr>
<tr>
<td>o-Xylene (CAS 95-47-6)</td>
<td>3 Not classifiable as to carcinogenicity to humans.</td>
</tr>
<tr>
<td>p-Xylene (CAS 106-42-3)</td>
<td>3 Not classifiable as to carcinogenicity to humans.</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>3 Not classifiable as to carcinogenicity to humans.</td>
</tr>
</tbody>
</table>

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive toxicity  Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure  May cause irritation to the respiratory system.
Specific target organ toxicity - repeated exposure  May cause damage to organs (central nervous system, kidney, liver) through prolonged or repeated exposure.
Aspiration hazard  May be fatal if swallowed and enters airways.
Chronic effects  Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. Long term exposures may affect liver, kidneys, and central nervous system.
Further information  No other specific acute or chronic health impact noted.

12. Ecological information
Ecotoxicity  Toxic to aquatic life.
Persistence and degradability  No data is available on the degradability of this product.
Bioaccumulative potential  No data available on bioaccumulation.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Partition coefficient n-octanol / water (log Kow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>3.15</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>2.73</td>
</tr>
<tr>
<td>m-Xylene (CAS 108-38-3)</td>
<td>3.2</td>
</tr>
<tr>
<td>o-Xylene (CAS 95-47-6)</td>
<td>3.12</td>
</tr>
<tr>
<td>p-Xylene (CAS 106-42-3)</td>
<td>3.15</td>
</tr>
</tbody>
</table>

Mobility in soil  The product is insoluble in water.
Other adverse effects  Oil spills are generally hazardous to the environment. The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations
Disposal instructions  Do not allow this material to drain into sewers/water supplies. Recover and recycle, if practical. Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act.
Local disposal regulations  Dispose in accordance with all applicable regulations.
Hazardous waste code  D001: Waste Flammable material with a flash point <140 F
D018: Waste Benzene
Waste from residues / unused products  Recover and recycle, if practical.
Contaminated packaging  Not applicable.

14. Transport information
DOT  
UN number  UN1307
UN proper shipping name  Xylenes
Transport hazard class(es)  
  Class  3
  Subsidiary risk  -
  Label(s)  3
Packing group  III
Special precautions for user  Read safety instructions, SDS and emergency procedures before handling.
Special provisions  B1, 1B3, T2, TP1.
Packaging exceptions
Packaging non bulk
Packaging bulk

IATA
UN number
UN1307
UN proper shipping name
Xylenes
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Environmental hazards No.
ERG Code 3L

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.

IMDG
UN number UN1307
UN proper shipping name XYLENES
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Environmental hazards
Marine pollutant No.
EmS F-E, S-D

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

15. Regulatory information
US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)
Ethylbenzene (CAS 100-41-4) LISTED
m-Xylene (CAS 108-38-3) LISTED
o-Xylene (CAS 95-47-6) LISTED
p-Xylene (CAS 106-42-3) LISTED
Toluene (CAS 108-88-3) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Xylene</td>
<td>108-38-3</td>
<td>35 - 46</td>
</tr>
<tr>
<td>p-Xylene</td>
<td>106-42-3</td>
<td>10 - 20</td>
</tr>
<tr>
<td>Ethylbenzene</td>
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<td>10 - 19</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>5 - 15</td>
</tr>
</tbody>
</table>
Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

- Ethylbenzene (CAS 100-41-4)
- m-Xylene (CAS 108-38-3)
- o-Xylene (CAS 95-47-6)
- p-Xylene (CAS 106-42-3)
- Toluene (CAS 108-88-3)

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

- Not regulated.

Safe Drinking Water Act (SDWA)

- Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
  - Toluene (CAS 108-88-3) 6594
- Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
  - Toluene (CAS 108-88-3) 35 %WV
- DEA Exempt Chemical Mixtures Code Number
  - Toluene (CAS 108-88-3) 594

US state regulations

US. Massachusetts RTK - Substance List

- Ethylbenzene (CAS 100-41-4)
- m-Xylene (CAS 108-38-3)
- o-Xylene (CAS 95-47-6)
- p-Xylene (CAS 106-42-3)
- Toluene (CAS 108-88-3)

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

- Ethylbenzene (CAS 100-41-4)
- m-Xylene (CAS 108-38-3)
- o-Xylene (CAS 95-47-6)
- p-Xylene (CAS 106-42-3)
- Toluene (CAS 108-88-3)

US. Pennsylvania Worker and Community Right-to-Know Law

- Ethylbenzene (CAS 100-41-4)
- m-Xylene (CAS 108-38-3)
- o-Xylene (CAS 95-47-6)
- p-Xylene (CAS 106-42-3)
- Toluene (CAS 108-88-3)

US. Rhode Island RTK

- Ethylbenzene (CAS 100-41-4)
- m-Xylene (CAS 108-38-3)
- o-Xylene (CAS 95-47-6)
- p-Xylene (CAS 106-42-3)
- Toluene (CAS 108-88-3)

US. California Proposition 65

- WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

- Benzene (CAS 71-43-2)
- Ethylbenzene (CAS 100-41-4)
- Toluene (CAS 108-88-3)

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
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</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
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<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
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Xylene

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<table>
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<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
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<tbody>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
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<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
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<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
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<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
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</table>

*“Yes” indicates this product complies with the inventory requirements administered by the governing country(s). A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

<table>
<thead>
<tr>
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<th>22-April-2015</th>
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**NFPA ratings**

![NFPA ratings](image)

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