1. Identification

Product identifier: Mixed Xylene

Other means of identification:
- SDS number: 412-GHS
- Synonyms: xylene (xylol); xylol; methyl toluene; benzene, dimethyl-; dimethylbenzene.

See section 16 for complete information.

Recommended use: This product is intended for use as a refinery feedstock, fuel or for use in engineered processes. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier: Valero Marketing & Supply Company and Affiliates
One Valero Way
San Antonio, TX 78269-6000

General Assistance: 210-345-4593
E-Mail: CorpHSE@valero.com
Contact Person: Industrial Hygienist

Emergency Telephone: 24 Hour Emergency 866-565-5220
1-800-424-9300 (CHEMTREC USA)

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 2B
- Carcinogenicity Category 2
- Specific target organ toxicity, single exposure Category 3 respiratory tract irritation
- Specific target organ toxicity, single exposure Category 3 narcotic effects
- Aspiration hazard Category 1

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

OSHA defined hazards: Not classified.

Label elements

Signal word: Warning

Hazard statement: Flammable liquid and vapor. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. Causes eye irritation. Harmful if inhaled. May cause drowsiness or dizziness. Suspected of causing cancer. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.

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 discharges. Avoid breathing gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.
Response

In case of fire: Use foam, carbon dioxide, dry powder or water fog for extinction. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. 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 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. Take off contaminated clothing and wash before reuse. Get medical advice/attention if you feel unwell. If exposed or concerned: Call a poison center/doctor.

Storage

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

Disposal

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

Hazard(s) not otherwise classified (HNOC)

None known.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene (o, m, p isomers)</td>
<td>1330-20-7</td>
<td>55 - 98</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>2 - 35</td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Skin contact

Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.

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.

Ingestion

Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Irritation. Drowsiness and dizziness.

Indication of immediate medical attention and special treatment needed

In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire-fighting measures

Suitable extinguishing media


Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Special protective equipment and precautions for firefighters

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. 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. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

**Specific methods**
Use water spray to cool unopened containers.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. 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.

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. Cover with plastic sheet to prevent spreading. Collect spillage. Following product recovery, flush area with water. Prevent product from entering drains. Do not allow material to contaminate ground water system. Clean surface thoroughly to remove residual contamination. Wipe up with absorbent material (e.g. cloth, fleece).

Never return spills in original containers for re-use. Prevent entry into waterways, sewers, basements or confined areas. Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Should not be released into the environment. Do not allow material to contaminate ground water system. Prevent product from entering drains.

Environmental precautions
If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802. For highway or railways spills, contact Chemtrec at 1-800-424-9300.

### 7. Handling and storage

#### Precautions for safe handling
Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Wear personal protective equipment. Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. 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 container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

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>Xylene (o, m, p isomers) (CAS 1330-20-7)</td>
<td>PEL</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 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>Xylene (o, m, p isomers) (CAS 1330-20-7)</td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 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></td>
<td>TWA</td>
<td>125 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
<tr>
<td>Xylene (o, m, p isomers) (CAS 1330-20-7)</td>
<td>STEL</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></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>0.7 g/g</td>
<td>Sum of mandelic acid and phenylglyoxylic acid</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
<tr>
<td>Xylene (o, m, p isomers) (CAS 1330-20-7)</td>
<td>1.5 g/g</td>
<td>Methylhippuric acids</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

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

Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

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

Skin protection

Hand protection

Avoid exposure - obtain special instructions before use. Wear protective gloves. Protective gloves.

Other

Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.
Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.

Thermal hazards

Not available.

General hygiene considerations

Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

**Appearance**

Colorless liquid.

**Physical state**

Liquid.

**Form**

Liquid.

**Color**

Colorless.

**Odor**

Aromatic. Benzene-like.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

-15.07 °F (-26.15 °C)

**Initial boiling point and boiling range**

281.93 °F (138.85 °C)

**Flash point**

80.3 - 89.3 °F (26.9 - 31.9 °C) Closed Cup

**Evaporation rate**

0.8 (Butyl acetate = 1)

**Flammability (solid, gas)**

Not available.

**Upper/lower flammability or explosive limits**

- **Flammability limit - lower (%)**
  1 %

- **Flammability limit - upper (%)**
  7 %

- **Explosive limit - lower (%)**
  Not available.

- **Explosive limit - upper (%)**
  Not available.

**Vapor pressure**

Not available.

**Vapor density**

3.7

**Relative density**

Not available.

**Solubility(ies)**

- **Solubility (water)**
  Very slightly soluble.

- **Partition coefficient (n-octanol/water)**
  Not available.

**Auto-ignition temperature**

865.94 - 984.02 °F (463.3 - 528.9 °C)

**Decomposition temperature**

Not available.

**Viscosity**

Not available.

**Other information**

- **Molecular formula**
  C8-H10

- **Percent volatile**
  100 %

10. Stability and reactivity

**Reactivity**

Not available.

**Chemical stability**

Stable under normal temperature conditions and recommended use.

**Possibility of hazardous reactions**

Hazardous polymerization does not occur.

Mixed Xylene

911600     Version #: 03     Revision date: 04-August-2014     Print date: 04-August-2014

Prepared by 3E Company
Conditions to avoid
Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

Incompatible materials

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

**Ingestion**
May be fatal if swallowed and enters airways.

**Inhalation**
Harmful if inhaled. May cause drowsiness or dizziness.

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

**Eye contact**
Causes eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics
Irritation. Drowsiness and dizziness.

Information on toxicological effects

**Acute toxicity**
Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed - may enter lungs if swallowed or vomited.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethylbenzene (CAS 100-41-4)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.8 ml/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>&gt; 8000 ppm, 20 Minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35.5 mg/l</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>4000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55 mg/l</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>3.5 g/kg</td>
</tr>
<tr>
<td><strong>Xylene (o, m, p isomers) (CAS 1330-20-7)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 5000 ml/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>5300 ppm, 6 Hours</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>5922 ppm, 4 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>10 ml/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
Causes skin irritation.

**Serious eye damage/eye irritation**
Causes eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization**
Not assigned.

**Skin sensitization**
Not assigned.

**Germ cell mutagenicity**
Not assigned.

**Carcinogenicity**
Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

- Ethylbenzene (CAS 100-41-4) 2B Possibly carcinogenic to humans.
- Xylene (o, m, p isomers) (CAS 1330-20-7) 3 Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2)

Cancer

Reproductive toxicity
Not assigned.

Specific target organ toxicity - single exposure
May cause drowsines or dizziness.

Specific target organ toxicity - repeated exposure
Not assigned.

Aspiration hazard
May be fatal if swallowed and enters airways.

Chronic effects
Contains organic solvents which in case of overexposure may depress the central nervous system causing dizziness and intoxication.

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>Aquatic</td>
<td>EC50 Water flea (Daphnia magna) 1 - 4 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td>Crustacea</td>
<td>LC50 Rainbow trout, donaldson trout (Oncorhynchus mykiss) 4 mg/l, 96 hours</td>
</tr>
<tr>
<td>Xylene (o, m, p isomers) (CAS 1330-20-7)</td>
<td>Aquatic</td>
<td>LC50 Rainbow trout, donaldson trout (Oncorhynchus mykiss) 8 mg/l, 96 Hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Partition coefficient n-octanol / water (log Kow)

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene (CAS 100-41-4)</td>
<td>3.15</td>
</tr>
<tr>
<td>Xylene (o, m, p isomers) (CAS 1330-20-7)</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Mobility in soil
Not available.

Other adverse effects
None known.

13. Disposal considerations

Disposal instructions
Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

Local disposal regulations
Dispose of in accordance with local regulations.

Hazardous waste code
D001: Waste Flammable material with a flash point <140 °F
U239: Waste Xylene

US RCRA Hazardous Waste U List: Reference

<table>
<thead>
<tr>
<th>Components</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>U019</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>U220</td>
</tr>
<tr>
<td>Xylene (o, m, p isomers) (CAS 1330-20-7)</td>
<td>U239</td>
</tr>
</tbody>
</table>

Waste from residues / unused products
Dispose in accordance with all applicable regulations.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN1307</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Xylenes</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
</tr>
<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>3</td>
</tr>
</tbody>
</table>
Packing group III
Special precautions for user Not available.
Special provisions B1, IB3, T2, TP1
Packaging exceptions 150
Packaging non bulk 203
Packaging bulk 242

IATA
UN number UN1307
UN proper shipping name Xylenes
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 3L
Special precautions for user Not available.

IMDG
UN number UN1307
UN proper shipping name XYLENES
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant No.
EmS F-E, S-D
Special precautions for user Not available.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
This product is a liquid and when transported in bulk is covered under MARPOL 73/78 Annex II.
This product is listed in the IBC Code.
Ship type: 2
Pollution category: Y

15. Regulatory information
US federal regulations This product is hazardous according to OSHA 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)
Benzene (CAS 71-43-2) Cancer
Central nervous system
Blood
Aspiration
Skin
Eye
respiratory tract irritation
Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)
Ethylbenzene (CAS 100-41-4) LISTED
Xylene (o, m, p isomers) (CAS 1330-20-7) 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>Xylene (o, m, p isomers)</td>
<td>1330-20-7</td>
<td>55 - 98</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>2 - 35</td>
</tr>
</tbody>
</table>

Other federal regulations

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

- Ethylbenzene (CAS 100-41-4)
- Xylene (o, m, p isomers) (CAS 1330-20-7)

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

Not regulated.

Clean Water Act (CWA)

- Section 112(r) (40 CFR 68.130) Hazardous substance
- Priority pollutant
- Toxic pollutant

Safe Drinking Water Act (SDWA)

- 0 mg/l
- 0.005 mg/l

US state regulations

US. Massachusetts RTK - Substance List
- Benzene (CAS 71-43-2)
- Ethylbenzene (CAS 100-41-4)
- Xylene (o, m, p isomers) (CAS 1330-20-7)

US. New Jersey Worker and Community Right-to-Know Act
- Benzene (CAS 71-43-2)
- Ethylbenzene (CAS 100-41-4)
- Toluene (CAS 108-88-3)
- Xylene (o, m, p isomers) (CAS 1330-20-7)

US. Pennsylvania Worker and Community Right-to-Know Law
- Benzene (CAS 71-43-2)
- Ethylbenzene (CAS 100-41-4)
- Toluene (CAS 108-88-3)
- Xylene (o, m, p isomers) (CAS 1330-20-7)

US. Rhode Island RTK
- Ethylbenzene (CAS 100-41-4)
- Xylene (o, m, p isomers) (CAS 1330-20-7)

US. California Proposition 65

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>
</tr>
</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>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “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

**Issue date** 18-December-2012

**Revision date** 04-August-2014

**Version #** 03

**NFPA ratings**

![NFPA ratings](image)

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