1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals

Synonyms:

Other means of identification:

Recommended use of the chemical and restrictions on use:

Supplier Details:

Avantik
32 Commerce St, Springfield, NJ 07081 USA.
Tel: (800) 783-9424

Emergency Contact: CHEMTREC: 1.800.424.9300 (USA)

2. HAZARDS IDENTIFICATION

OSHA Hazards:
Flammable liquid, Irritant

Target Organs:
Respiratory system, Skin

NFPA

GHS label elements, including precautionary statements
Signal Word: WARNING!

Hazard statement(s)
H335 May cause respiratory irritation.
H319 Causes serious eye irritation.
H312 Harmful in contact with skin
H315 Causes skin irritation.
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H226 Flammable liquid and vapor

Precautionary statement(s)
P331 Do NOT induce vomiting.
P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P280 Wear protective gloves and eye and face protection.
P280 P361 + P353 IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.

GHS Classification(s)
Specific target organ toxicity - single exposure (Category 3)
Acute toxicity, Inhalation (Category 4)
Aspiration hazard (Category 1)
Specific target organ toxicity - repeated exposure (Category 2)
Acute Toxicity, Dermal (Category 4)
Skin Irritation (Category 2)
Eye Irritation (Category 2)
Flammable Liquids (Category 3)

Other hazards which do not result in classification:

Potential Health Effects:
### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical identity:</th>
<th>Xylene mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common name / Synonym:</td>
<td>Dimethylbenzene, xylol, methyltoluene</td>
</tr>
<tr>
<td>CAS number:</td>
<td>1330-20-7; 100-41-4</td>
</tr>
<tr>
<td>EINECS number:</td>
<td>215-535-7; 202-849-4</td>
</tr>
<tr>
<td>ICSC number:</td>
<td>0268 (Ethyl Benzene)</td>
</tr>
<tr>
<td>RTECS #:</td>
<td>DA0700000 (Ethyl Benzene)</td>
</tr>
<tr>
<td>UN #:</td>
<td>UN1307 (Xylenes)</td>
</tr>
<tr>
<td>EC #:</td>
<td>601-023-00-4 (Ethyl benzene)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Weight</th>
<th>Material</th>
<th>CAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-25</td>
<td>Ethyl benzene</td>
<td>100-41-4</td>
</tr>
<tr>
<td>75-85</td>
<td>Xylenes</td>
<td>1330-20-7</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**General advice**
Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Skin**
Wash skin with soap and copious amounts of water. Seek medical attention.

**Inhalation**
Remove person to fresh air. Seek medical attention. Give oxygen or artificial respiration as needed.

**Eyes**
Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.

**Ingestion**
DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything my mouth to an unconscious individual.

### 5. FIRE FIGHTING MEASURES
Suitable (and unsuitable) extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):
Carbon oxides expected to be the primary hazardous combustion product.

Special protective equipment and precautions for firefighters:
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Flammable Properties
Classification
OSHA/NFPA Class IC Flammable Liquid.
Flash point
25 °C (77 °F) - Closed Cup

6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protective equipment and emergency procedures:
Wear respiratory protection. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:
Stop leak / contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:
Contain spill, then collect with an electrically protected vacuum cleaner or by wet-brushing and put the material into a convenient waste disposal container. Keep container closed.

7. HANDLING AND STORAGE
Precautions for safe handling:
Do not get on skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well ventilated location. Keep containers upright to prevent leaks/spills.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
Control parameters, e.g., occupational exposure limit values or biological limit values:
### Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>Source</th>
<th>Type</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>US (OSHA)</td>
<td>TWA</td>
<td>100 ppm / 435 mg/m3</td>
<td>29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>US (ACGIH)</td>
<td>TWA</td>
<td>100 ppm</td>
<td>ACGIH Threshold Limit Value</td>
</tr>
<tr>
<td>Xylene</td>
<td>US (ACGIH)</td>
<td>TWA</td>
<td>100 ppm / 34 mg/m3</td>
<td>ACGIH Threshold Limit Value</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>US (OSHA)</td>
<td>TWA</td>
<td>100 ppm / 435 mg/m3</td>
<td>29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>US (NIOSH)</td>
<td>TWA</td>
<td>100 ppm / 435 mg/m3</td>
<td>NIOSH Recommended Exposure Limit</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>US (OSHA)</td>
<td>TWA</td>
<td>400 ppm</td>
<td></td>
</tr>
</tbody>
</table>

### Appropriate engineering controls:
General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

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

#### Respiratory protection:
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection:
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

#### Skin and body protection:
Wear impervious, flame retardant, antistatic protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

#### Hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance (physical state, color, etc.)</th>
<th>Liquid. Colorless, clear.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C (&lt; 32 °F)</td>
</tr>
</tbody>
</table>
**Initial boiling point and boiling range** 137 - 140 °C (279 - 284 °F) - lit

**Flash point** 25 °C (77 °F) - Closed Cup

**Upper / Lower flammability or explosive limits** 1.1% (V) / 7.0% (V)

**Vapor pressure** 24 hPa (18 mmHg) at 37.70 °C (99.86 °F)

**Vapor Density** 3.7

**Relative Density** 0.86 g/cm3

**Solubility(ies)** Insoluble in water.

**Partition coefficient n-octanol/water(ies)** log Pow: 3.15

**Auto-ignition temperature** 528°C (984°F)

**Formula (XYLENE MIXTURE)** C8H10

**Molecular Weight (XYLENE MIXTURE)** 106.17 g/mol

### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Chemical Stability</th>
<th>Stable under recommended storage conditions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Vapors may form explosive mixture with air.</td>
</tr>
<tr>
<td>Conditions to avoid (e.g., static discharge, shock or vibration)</td>
<td>Heat, flames, and sparks.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong oxidizing agents</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Hazardous decomposition products formed under fire conditions. - Carbon oxides</td>
</tr>
</tbody>
</table>

### 11. TOXICOLOGICAL INFORMATION

- **Xylene Mixture 1330-20-7; 100-41-4**

  **Product Summary:**
  No data is available for the teratogenic, mutagenic or the reproductive toxicity effects of this product.

  **Carcinogenicity**
  IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Xylene); Group 2B: Possibly carcinogenic to humans (Ethylbenzene)
  ACGIH: No data is available.
  NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
  OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

  **Other Hazards**

<table>
<thead>
<tr>
<th>Organ</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Product causes eye irritation.</td>
</tr>
</tbody>
</table>
Ingestion  | Product may be harmful if swallowed.
Inhalation | Product may be harmful if inhaled. Causes respiratory tract irritation.
Skin       | Product causes skin irritation.

12. ECOLOGICAL INFORMATION

- Xylene Mixture 1330-20-7; 100-41-4

Other adverse effects:
An environmental hazard is possible if product is handled/disposed of improperly. Product is toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1307</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Xylenes</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
</tr>
<tr>
<td>Packing group (if applicable)</td>
<td>III</td>
</tr>
</tbody>
</table>

Reportable Quantity
100 lbs.

IMDG
UN-Number: UN1307 Class: 3 Packing Group: III
EMS-No: F-E, S-D
Proper shipping name: XYLENES
Marine pollutant: No

IATA
UN-Number: UN1307 Class: 3 Packing Group: III
Proper shipping name: Xylenes

15. REGULATORY INFORMATION
Safety, health and environmental regulations specific for the product in question:

**OSHA Hazards**
Flammable liquid, Irritant

All ingredients are on the following inventories or are exempted from listing

<table>
<thead>
<tr>
<th>Country</th>
<th>Notification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>AICS</td>
</tr>
<tr>
<td>Canada</td>
<td>DSL</td>
</tr>
<tr>
<td>China</td>
<td>IECS</td>
</tr>
<tr>
<td>European Union</td>
<td>EINECS</td>
</tr>
<tr>
<td>Japan</td>
<td>ENCS/ISHL</td>
</tr>
<tr>
<td>Korea</td>
<td>ECL</td>
</tr>
<tr>
<td>New Zealand</td>
<td>NZIoC</td>
</tr>
<tr>
<td>Philippines</td>
<td>PICCS</td>
</tr>
<tr>
<td>United States of America</td>
<td>TSCA</td>
</tr>
</tbody>
</table>

**SARA 302 Components**
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
The following components are subject to reporting levels established by SARA Title III, Section 313: Ethylbenzene CAS-No. 100-41-4 Revision Date 2007-07-01 Xylene CAS-No. 1330-20-7 Revision Date 1989-08-11

**SARA 311/312 Hazards**
Acute Health Hazard
Chronic Health Hazard
Fire Hazard

**CERCLA**
No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

**Massachusetts Right To Know Components**
Ethylbenzene CAS-No. 100-41-4 Revision Date 2007-07-01; Xylene CAS-No.1330-20-7 Revision Date 1989-08-11

**Pennsylvania Right To Know Components**
Ethylbenzene CAS-No. 100-41-4 Revision Date 2007-07-01; Xylene CAS-No.1330-20-7 Revision Date 1989-08-11

**New Jersey Right To Know Components**
Ethylbenzene CAS-No. 100-41-4 Revision Date 2007-07-01; Xylene CAS-No.1330-20-7 Revision Date 1989-08-11
16. OTHER INFORMATION:
INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

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