1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Xylenes

Product Number : 247642
Brand : Sigma-Aldrich

Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone #: (314) 776-6555
Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid, Carcinogen, Target Organ Effect, Harmful by skin absorption., Irritant

Target Organs
Liver, Kidney, Blood, Eyes, ears, Heart, Bone marrow, Central nervous system

GHS Classification
Flammable liquids (Category 3)
Acute toxicity, Oral (Category 5)
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram
danger

Signal word : Danger

Hazard statement(s)
H226 Flammable liquid and vapour.
H303 May be harmful if swallowed.
H312 + H332 Harmful in contact with skin or if inhaled
H315 Causes skin irritation.
H318 Causes serious eye damage.
H401 Toxic to aquatic life.

Precautionary statement(s)
P280 Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
HMIS Classification
- Health hazard: 2
- Chronic Health Hazard: *
- Flammability: 3
- Physical hazards: 0

NFPA Rating
- Health hazard: 2
- Fire: 3
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
- Skin: Causes skin irritation.
- Eyes: Causes eye irritation.
- Ingestion: May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Xylene mixture of isomers

Formula: C₈H₁₀

Molecular Weight: 106.17 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; H226, H312 + H332, H315</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>1330-20-7</td>
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<tr>
<td>EC-No.</td>
<td>215-535-7</td>
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<tr>
<td>Index-No.</td>
<td>601-022-00-9</td>
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</tr>
<tr>
<td>Ethylbenzene</td>
<td>Flam. Liq. 2; Acute Tox. 4; H225, H332</td>
<td>10 - 30 %</td>
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<tr>
<td>CAS-No.</td>
<td>100-41-4</td>
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<td>EC-No.</td>
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<td>Index-No.</td>
<td>601-023-00-4</td>
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</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>TWA</td>
<td>100 ppm 435 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm 435 mg/m³</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>150 ppm 655 mg/m³</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm 434 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

Remarks
Not classifiable as a human carcinogen

<table>
<thead>
<tr>
<th>STEL</th>
<th>150 ppm 651 mg/m³</th>
<th>USA. ACGIH Threshold Limit Values (TLV)</th>
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</table>

Not classifiable as a human carcinogen

<table>
<thead>
<tr>
<th>TWA</th>
<th>100 ppm</th>
<th>USA. ACGIH Threshold Limit Values (TLV)</th>
</tr>
</thead>
</table>

Eye & Upper Respiratory Tract irritation Central Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen

<table>
<thead>
<tr>
<th>STEL</th>
<th>150 ppm</th>
<th>USA. ACGIH Threshold Limit Values (TLV)</th>
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Eye & Upper Respiratory Tract irritation Central Nervous System impairment Substances for which
There is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen

<table>
<thead>
<tr>
<th></th>
<th>TWA 100 ppm</th>
<th>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>435 mg/m³</td>
<td></td>
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</tbody>
</table>

The value in mg/m³ is approximate.

<table>
<thead>
<tr>
<th></th>
<th>TWA 100 ppm</th>
<th>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>435 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL 150 ppm</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
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<tr>
<td></td>
<td>655 mg/m³</td>
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Ethylbenzene 100-41-4

<table>
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<th></th>
<th>TWA 100 ppm</th>
<th>USA. ACGIH Threshold Limit Values (TLV)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Remarks

Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans

<table>
<thead>
<tr>
<th></th>
<th>STEL 125 ppm</th>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>TWA 100 ppm</th>
<th>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>435 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL 125 ppm</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
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<tr>
<td></td>
<td>545 mg/m³</td>
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</table>

The value in mg/m³ is approximate.

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<thead>
<tr>
<th></th>
<th>TWA 100 ppm</th>
<th>USA. NIOSH Recommended Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>435 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

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**
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**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

Appearance
- Form: clear, liquid
- Colour: colourless

Safety data
- pH: no data available
- Melting point/freezing point: < 0 °C (< 32 °F)
- Boiling point: 137 - 140 °C (279 - 284 °F) - lit.
- Flash point: 25 °C (77 °F) - closed cup
- Ignition temperature: 464 °C (867 °F)
- Auto-ignition temperature: no data available
- Lower explosion limit: 1.1 % (V)
- Upper explosion limit: 7 % (V)
- Vapour pressure: 24 hPa (18 mmHg) at 37.70 °C (99.86 °F)
- Density: 0.86 g/mL at 25 °C (77 °F)
- Water solubility: no data available
- Partition coefficient: n-octanol/water: no data available
- Relative vapor density: 3.67 - (Air = 1.0)
- Odour: no data available
- Odour Threshold: no data available
- Evaporation rate: no data available

10. STABILITY AND REACTIVITY

Chemical stability
- Stable under recommended storage conditions.

Possibility of hazardous reactions
- Vapours may form explosive mixture with air.

Conditions to avoid
- Heat, flames and sparks.

Materials to avoid
- Strong oxidizing agents

Hazardous decomposition products
- Hazardous decomposition products formed under fire conditions: Carbon oxides
- Other decomposition products: no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
- Oral LD50: no data available
- Inhalation LC50: no data available
Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
Eyes: no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethylbenzene)
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Xylene)
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.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin Causes skin irritation.
Eyes Causes eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION
Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
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.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1307  Class: 3  Packing group: III
Proper shipping name: Xylenes
Reportable Quantity (RQ): 100 lbs
Marine Pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 1307  Class: 3  Packing group: III  EMS-No: F-E, S-D
Proper shipping name: XYLENES
Marine Pollutant: No

IATA
UN number: 1307  Class: 3  Packing group: III
Proper shipping name: Xylenes

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid, Carcinogen, Target Organ Effect, Harmful by skin absorption., Irritant

SARA 302 Components
SARA 302: 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:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>2007-07-01</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>1989-08-11</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard
Massachusetts Right To Know Components

<table>
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<tr>
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<tbody>
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<td>1330-20-7</td>
<td>1989-08-11</td>
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Pennsylvania Right To Know Components

<table>
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<tr>
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<th>CAS-No.</th>
<th>Revision Date</th>
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</tbody>
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New Jersey Right To Know Components

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California Prop. 65 Components

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</table>

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

<table>
<thead>
<tr>
<th>H-code</th>
<th>R-phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
<td></td>
</tr>
<tr>
<td>Flam. Liq.</td>
<td>Flammable liquids</td>
<td></td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
<td></td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour.</td>
<td></td>
</tr>
<tr>
<td>H312 + H332</td>
<td>Harmful in contact with skin or if inhaled</td>
<td></td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
<td></td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Skin irritation</td>
<td></td>
</tr>
</tbody>
</table>

Further information

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