1. Identification

Product Name: o-Xylene

Cat No.: AC140990000; AC140990010; AC140990025; AC140990100; AC140990200

CAS-No: 95-47-6

Synonyms: 1,2-Dimethylbenzene

Recommended Use: Laboratory chemicals.

Uses advised against: Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information US: 001-800-ACROS-01 / Europe: +32 14 57 52 11
Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No. US: 001-800-424-9300 / Europe: 001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Flammable liquids</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute dermal toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Target Organs - Respiratory system, Central nervous system (CNS).</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Target Organs - Liver.</td>
<td>Category 2</td>
</tr>
<tr>
<td>Aspiration Toxicity</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
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
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements
Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dust/fume/gas/mist/vapors/spray
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
Keep cool
Response
Get medical attention/advice if you feel unwell
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Skin
Call a POISON CENTER or doctor/physician if you feel unwell
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Eyes
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
Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do NOT induce vomiting
Fire
In case of fire: Use CO2, dry chemical, or foam for extinction
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Harmful to aquatic life with long lasting effects

3. Composition/Information on Ingredients
### 4. First-aid measures

**General Advice**
If symptoms persist, call a physician.

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation**
Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. Risk of serious damage to the lungs.

**Ingestion**
Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately. If vomiting occurs naturally, have victim lean forward.

**Most important symptoms and effects**
Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Notes to Physician**
Treat symptomatically

### 5. Fire-fighting measures

**Suitable Extinguishing Media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

**Unsuitable Extinguishing Media**
Do not use a solid water stream as it may scatter and spread fire

**Flash Point**
31 °C / 87.8 °F

**Method -**
No information available

**Autoignition Temperature**
465 °C / 869 °F

**Explosion Limits**
- Upper: 6.7 vol %
- Lower: 0.9 vol %

**Sensitivity to Mechanical Impact**
No information available

**Sensitivity to Static Discharge**
No information available

**Specific Hazards Arising from the Chemical**
Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

**Hazardous Combustion Products**
Carbon monoxide (CO) Carbon dioxide (CO₂)

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**
- Health: 3
- Flammability: 3
- Instability: 0
- Physical hazards: N/A

### 6. Accidental release measures

**Personal Precautions**
Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
### Environmental Precautions
Should not be released into the environment. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage. Do not flush into surface water or sanitary sewer system.

### Methods for Containment and Clean Up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

### 7. Handling and storage

#### Handling
Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

#### Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area.

### 8. Exposure controls / personal protection

#### Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>TWA: 100 ppm STEL: 150 ppm</td>
<td>IDLH: 900 ppm TWA: 100 ppm TWA: 435 mg/m³ STEL: 150 ppm STEL: 655 mg/m³</td>
<td>TWA: 100 ppm TWA: 435 mg/m³ STEL: 150 ppm STEL: 655 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

#### Legend
ACGIH - American Conference of Governmental Industrial Hygienists
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

#### Engineering Measures
Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.

#### Personal Protective Equipment

| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| Skin and body protection | Long sleeved clothing. |
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

### 9. Physical and chemical properties

| Physical State | Liquid |
| Appearance  | Colorless |
| Odor | sweet, Characteristic |
| Odor Threshold | No information available |
| pH | Not applicable |
| Melting Point/Range | -25 °C / -13 °F |
| Boiling Point/Range | 143 - 145 °C / 289.4 - 293 °F |
| Flash Point | 31 °C / 87.8 °F |
Evaporation Rate  
0.7
Flammability (solid, gas)  
Not applicable
Flammability or explosive limits  
Upper  
6.7 vol %
Lower  
0.9 vol %
Vapor Pressure  
No information available
Vapor Density  
3.7
Specific Gravity  
0.878
Solubility  
No information available
Partition coefficient; n-octanol/water  
No data available
Autoignition Temperature  
465 °C / 869 °F
Decomposition Temperature  
No information available
Viscosity  
No information available
Molecular Formula  
C8 H10
Molecular Weight  
106.17

**10. Stability and reactivity**

Reactive Hazard  
None known, based on information available
Stability  
Stable under normal conditions.
Conditions to Avoid  
Incompatible Materials  
Strong oxidizing agents, Strong acids
Hazardous Decomposition Products  
Carbon monoxide (CO), Carbon dioxide (CO₂)
Hazardous Polymerization  
Hazardous polymerization does not occur.
Hazardous Reactions  
None under normal processing.

**11. Toxicological information**

Acute Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral (mg/kg) (Rat)</th>
<th>LD50 Dermal (mg/kg) (Rabbit)</th>
<th>LC50 Inhalation ppm (Rat) 6 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>3608</td>
<td>14100</td>
<td>4330</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products  
No information available
Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation  
Irritating to skin
Sensitization  
No information available
Carcinogenicity  
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects  
No information available
Reproductive Effects  
No information available.
Developmental Effects  
No information available.
Teratogenicity  
No information available.
STOT - single exposure  
Respiratory system Central nervous system (CNS)

STOT - repeated exposure  
Liver

Aspiration hazard  
No information available

Symptoms / effects, both acute and delayed  
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information  
No information available

Other Adverse Effects  
The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains. The product contains following substances which are hazardous for the environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
</table>
| o-Xylene  | EC50: 4.2 mg/L, 192h  
(Pseudokirchneriella subcapitata)  
EC50: 4.7 mg/L, 72h static  
(Pseudokirchneriella subcapitata)  
| LC50: 16.1 mg/L/96h  
(Lepomis macrochirus)  
LC50: 13 mg/L/24h  
(Carassius auratus)  
| EC50 = 0.0084 mg/L 24 h  
| EC50: 2.61 - 5.59 mg/L, 48h  
Flow through (Daphnia magna)  
EC50: 0.78 - 2.51 mg/L, 48h  
Static (Daphnia magna)  
EC50: = 3.2 mg/L, 48h  
(Daphnia magna)  

Persistence and Degradability  
Insoluble in water Persistence is unlikely based on information available.

Bioaccumulation/Accumulation  
No information available.

Mobility  
Will likely be mobile in the environment due to its volatility.

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>3.12</td>
</tr>
</tbody>
</table>

13. Disposal considerations

Waste Disposal Methods  
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT  
UN-No UN1307  
Proper Shipping Name XYLENES  
Hazard Class 3  
Packing Group III

TDG  
UN-No UN1307  
Proper Shipping Name XYLENES  
Hazard Class 3  
Packing Group III

IATA  
UN-No UN1307  
Proper Shipping Name Xylenes  
Hazard Class 3  
Packing Group III

IMDG/IMO  
UN-No UN1307
15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>202-422-2</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 3 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>&gt;95</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Clean Air Act

<table>
<thead>
<tr>
<th>Component</th>
<th>HAPS Data</th>
<th>Class 1 Ozone Depleters</th>
<th>Class 2 Ozone Depleters</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>1000 lb</td>
<td>-</td>
</tr>
</tbody>
</table>

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
</table>
16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date
15-Jun-2010
Revision Date
18-Jan-2018
Print Date
18-Jan-2018
Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS