SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 10/02/2015

SECTION 1. Identification
Product identifier
Product number  XX0060
Product name  Xylenes For Histology
CAS-No.  1330-20-7

Relevant identified uses of the substance or mixture and uses advised against
Identified uses  Reagent for analysis

Details of the supplier of the safety data sheet
Company  EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821,
United States of America | General Inquiries: +1-978-715-4321 |
Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)

Emergency telephone  800-424-9300 CHEMTREC (USA)
+1-703-527-3887 CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2. Hazards identification
GHS Classification
Flammable liquid, Category 3, H226
Acute toxicity, Category 4, Inhalation, H332
Acute toxicity, Category 4, Dermal, H312
Skin irritation, Category 2, H315
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, H335
Specific target organ systemic toxicity - repeated exposure, Category 2, Central nervous system, Liver,
Kidney, H373
Aspiration hazard, Category 1, H304
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling
Hazard pictograms

Signal Word
Danger
**Hazard Statements**
- H226 Flammable liquid and vapor.
- H304 May be fatal if swallowed and enters airways.
- H312 + H332 Harmful in contact with skin or if inhaled.
- H315 Causes skin irritation.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs (Central nervous system, Liver, Kidney) through prolonged or repeated exposure.

**Precautionary Statements**
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P314 Get medical advice/attention if you feel unwell.
- P322 Specific measures (see supplemental first aid instructions on this label).
- P331 Do NOT induce vomiting.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents/container to an approved waste disposal plant.

**Other hazards**
None known.

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**SECTION 3. Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Formula</th>
<th>C₈H₁₀ (Hill)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molar mass</td>
<td>106.17 g/mol</td>
</tr>
</tbody>
</table>

**Hazardous ingredients**

*Chemical Name (Concentration)*
- **CAS-No.**
- **Xylene (Mixture of isomers) (>= 90 % - <= 100 % )**
  1330-20-7

Exact percentages are being withheld as a trade secret.
SECTION 4. First aid measures

Description of first-aid measures

**Inhalation**
After inhalation: fresh air. Call in physician.

**Skin contact**
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

**Eye contact**
After eye contact: rinse out with plenty of water. Call in ophthalmologist.

**Ingestion**

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed
- irritant effects
  - somnolence, Dizziness, Headache, euphoria, agitation, spasms, narcosis, Cough, Shortness of breath

Indication of any immediate medical attention and special treatment needed
- No information available.

SECTION 5. Fire-fighting measures

**Extinguishing media**
- Suitable extinguishing media
  - Foam, Carbon dioxide (CO2), Dry powder
- Unsuitable extinguishing media
  - For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
- Combustible.
- Vapors are heavier than air and may spread along floors.
- Forms explosive mixtures with air at elevated temperatures.
- Development of hazardous combustion gases or vapors possible in the event of fire.

**Advice for firefighters**
- Special protective equipment for fire-fighters
  - Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

  Further information
  - Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:
Protective equipment see section 8.

Environmental precautions
Do not let product enter drains. Risk of explosion.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Observe label precautions.

Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Store at room temperature.
SECTION 8. Exposure controls/personal protection

Exposure limit(s)

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Basis</th>
<th>Value</th>
<th>Threshold limits</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene (Mixture of isomers) 1330-20-7</td>
<td>ACGIH</td>
<td>Short Term Exposure Limit (STEL):</td>
<td>150 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time Weighted Average (TWA):</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NIOSH/GUIDE</td>
<td>Recommended exposure limit (REL):</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recommended exposure limit (REL):</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short Term Exposure Limit (STEL):</td>
<td>150 ppm</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>150 ppm</td>
<td>655 mg/m³</td>
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<td>150 ppm</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recommended exposure limit (REL):</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA_TRANS</td>
<td>PEL:</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Z1A</td>
<td>Short Term Exposure Limit (STEL):</td>
<td>150 ppm</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time Weighted Average (TWA):</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
</tbody>
</table>

Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures
Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance.

Eye/face protection
Safety glasses

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Other protective equipment:
Flame retardant antistatic protective clothing.

Respiratory protection required when vapors/aerosols are generated.

SECTION 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>clear colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>aromatic</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>No information available.</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>ca. 136 - 144 °C (136 - 144 °C) at 1,013 hPa</td>
</tr>
<tr>
<td>Flash point</td>
<td>29.4 °C (29.4 °C) Method: c.c.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available.</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>1 % (V)</td>
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<tr>
<td>Upper explosion limit</td>
<td>7 % (V)</td>
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<tr>
<td>Vapor pressure</td>
<td>No information available.</td>
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<tr>
<td>Relative vapor density</td>
<td>No information available.</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 0.86 - 0.88 g/cm³ at 25 °C (25 °C)</td>
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<tr>
<td>Relative density</td>
<td>No information available.</td>
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<tr>
<td>Water solubility</td>
<td>slightly soluble</td>
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<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available.</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
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Product number: XX0060
Product name: Xylenes For Histology
Version: 1.2

Decomposition temperature: No information available.
Viscosity, dynamic: ca.0.58 - 0.76 mPa.s at 25 °C (25 °C)
Explosive properties: Not classified as explosive.
Oxidizing properties: none

SECTION 10. Stability and reactivity
Reactivity
Vapor/air-mixtures are explosive at intense warming.

Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions
Violent reactions possible with:
Strong oxidizing agents

Conditions to avoid
Heating.

Incompatible materials
no information available

Hazardous decomposition products
no information available

SECTION 11. Toxicological information
Information on toxicological effects
Likely route of exposure
Eye contact, Skin contact
Acute oral toxicity
LD50 Rat: 3,523 mg/kg (ECHA)
Symptoms: Gastrointestinal disturbance, Risk of aspiration upon vomiting.
Acute inhalation toxicity
Acute toxicity estimate: 11.1 mg/l; vapor
Expert judgment
Symptoms: Inhalation may lead to the formation of oedemas in the respiratory tract.
Acute dermal toxicity
Acute toxicity estimate: 1,100.1 mg/kg
Expert judgment
absorption

Skin irritation
Rabbit
Result: Irritations
(IUCLID)

Causes skin irritation.
Drying-out effect resulting in rough and chapped skin.

Sensitization
In animal experiments: Mouse
Result: Does not cause skin sensitization.
Method: OECD Test Guideline 429

Genotoxicity in vitro
Mutagenicity (mammal cell test): chromosome aberration.
Result: negative
(National Toxicology Program)

Ames test
Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471
(IUCLID)

Carcinogenicity
No indication of carcinogenic activity. (IUCLID)

Specific target organ systemic toxicity - single exposure
May cause respiratory irritation.

Specific target organ systemic toxicity - repeated exposure
Target Organs: Central nervous system, Liver, Kidney
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

Carcinogenicity

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information
After long-term exposure to the chemical:
Dermatitis
After absorption of toxic quantities:
Systemic effects:
Headache, somnolence, Dizziness, euphoria, agitation, spasms, narcosis
Effect potentiated by: ethanol
Damage to:
Kidney, Central nervous system, Liver
Further data:
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity
Toxicity to fish (Chronic toxicity)
flow-through test NOEC Oncorhynchus mykiss (rainbow trout): > 1.3 mg/l; 56 d

Analytical monitoring: yes

Persistence and degradability
No information available.

Bioaccumulative potential
No information available.

Mobility in soil
No information available.

SECTION 13. Disposal considerations
The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)
UN number UN 1307
Proper shipping name XYLENES
Class 3
Packing group II
Environmentally hazardous --

Air transport (IATA)
Section 15. Regulatory information

United States of America

SARA 313
The following components are subject to reporting levels established by SARA Title III, Section 313:

Ingredients
Xylene (Mixture of isomers) 1330-20-7 100 %

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

Clean Water Act
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Ingredients
Xylene (Mixture of isomers)

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Ingredients
Xylene (Mixture of isomers)

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Ingredients
Xylene (Mixture of isomers)

Pennsylvania Right To Know

Ingredients
Xylene (Mixture of isomers)
**New Jersey Right To Know**

*Ingredients*
Xylene (Mixture of isomers)

**California Prop 65 Components**
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**
- **TSCA:** All components of the product are listed in the TSCA-inventory.
- **DSL:** All components of this product are on the Canadian DSL

## SECTION 16. Other information

**Training advice**
Provide adequate information, instruction and training for operators.

**Labeling**

*Hazard pictograms*

![Hazard pictograms](image)

*Signal Word*
Danger

*Hazard Statements*
- H226 Flammable liquid and vapor.
- H304 May be fatal if swallowed and enters airways.
- H312 + H332 Harmful in contact with skin or if inhaled.
- H315 Causes skin irritation.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs (Central nervous system, Liver, Kidney) through prolonged or repeated exposure.

*Precautionary Statements*

**Prevention**
P210 Keep away from heat.

**Response**
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P314 Get medical advice/ attention if you feel unwell.
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<table>
<thead>
<tr>
<th>Product number</th>
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<td>Product name</td>
<td>Xylenes For Histology</td>
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Full text of H-Statements referred to under sections 2 and 3.

- **H226** Flammable liquid and vapor.
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- **H315** Causes skin irritation.
- **H332** Harmful if inhaled.
- **H335** May cause respiratory irritation.
- **H373** May cause damage to organs through prolonged or repeated exposure.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 10/02/2015

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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