

SAFETY DATA SHEET



Mixed Xylenes (BDH1170-4LG, BDH1170-19L, BDH1170-204L, BDH1176-204L)

00000020158

Version 1.1

Revision Date 04/12/2016

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Mixed Xylenes (BDH1170-4LG, BDH1170-19L, BDH1170-204L, BDH1176-204L)

Number : 00000020158

Product Use Description : Solvent

Manufactured for : VWR International LLC
Radnor Corporate Center
Building One
Suite 200
100 Matsonford Road
Radnor PA 19087

For more information call : (Monday-Friday, 8.00am-5:00pm)
1-800-932-5000

In case of emergency call : (24 hours/day, 7 days/week)
1-800-424-9300 (USA Only)
For Transportation Emergencies:
1-800-424-9300 (CHEMTREC - Domestic)
1-613-996-6666 (CANUTEC - Canada)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form : liquid

Color : clear and colourless to light yellow

Odor : aromatic

Classification of the substance or mixture

Classification of the substance : Flammable liquids, Category 3

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or mixture

Skin irritation, Category 2
 Eye irritation, Category 2A
 Carcinogenicity, Category 2
 Specific target organ toxicity - single exposure, Category 3,
 Respiratory system
 Specific target organ toxicity - repeated exposure, Category 2,
 Central nervous system, Liver, Kidney, Sensory organs
 Aspiration hazard, Category 1

GHS Label elements, including precautionary statements

Symbol(s)

:



Signal word

: Danger

Hazard statements

: Flammable liquid and vapour.
 May be fatal if swallowed and enters airways.
 Causes skin irritation.
 Causes serious eye irritation.
 May cause respiratory irritation.
 Suspected of causing cancer.
 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

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 discharge.
 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 Wash skin thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.

Response:


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IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF exposed or concerned: Get medical advice/ attention. Do NOT induce vomiting.
 If skin irritation occurs: Get medical advice/ attention.
 If eye irritation persists: Get medical advice/ attention.
 Take off contaminated clothing and wash before reuse.
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

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

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

| | | |
|--------|---|----------|
| IARC: | Ethylbenzene | 100-41-4 |
| | Group 2B: Possibly carcinogenic to humans | |
| ACGIH: | Ethylbenzene | 100-41-4 |
| | A3: Confirmed animal carcinogen | |

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

| Chemical Name | CAS-No. | Concentration |
|---------------|---------|---------------|
|---------------|---------|---------------|


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| | | |
|-----------------------------|-----------|-----------------|
| Xylene (mixture of isomers) | 1330-20-7 | 75.00 - 85.00 % |
| Ethylbenzene | 100-41-4 | 15.00 - 25.00 % |

SECTION 4. FIRST AID MEASURES

- Inhalation : Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.
- Ingestion : Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately. Never give anything by mouth to an unconscious person.

Notes to physician

- Treatment : Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. If a person vomits when lying on his back, place him in the recovery position. Later control for pneumonia and lung oedema.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : Water may be ineffective.
Do not use a solid water stream as it may scatter and spread fire.


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|---|--|
| Specific hazards during firefighting | : Flammable. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO ₂) |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus and protective suit. |
| Further information | : In the event of fire and/or explosion do not breathe fumes. Cool containers/tanks with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | |
|---------------------------|--|
| Personal precautions | : Wear personal protective equipment. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Eliminate all ignition sources if safe to do so. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. |
| Environmental precautions | : Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses. |
| Methods for cleaning up | : Ventilate the area. No sparking tools should be used. Use explosion-proof equipment. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). |

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SECTION 7. HANDLING AND STORAGE**Handling**

Handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not smoke.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.
Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations.
Use explosion-proof equipment.
Keep product and empty container away from heat and sources of ignition.
No sparking tools should be used.
No smoking.
A more detailed discussion can be found in NFPA Bulletin 77, "Recommended Practice on Static Electricity."

Storage

Requirements for storage areas and containers : Store in area designed for storage of flammable liquids. Protect from physical damage.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Store away from incompatible substances.
Container hazardous when empty.
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.
- Engineering measures : Use with local exhaust ventilation.
Prevent vapour buildup by providing adequate ventilation during and after use.
- Eye protection : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes
- Hand protection : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : Wear as appropriate:
Solvent-resistant apron and boots
Flame retardant antistatic protective clothing.
If splashes are likely to occur, wear:
Protective suit
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Exposure Guidelines

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|------------|---------|-------|--------------------|--------|-------|
| | | | | | |

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|-----------------------------|-----------|---|---------------------|------|---|
| Xylene (mixture of isomers) | 1330-20-7 | STEL : Short term exposure limit | (150 ppm) | 2008 | ACGIH:US. ACGIH Threshold Limit Values |
| Xylene (mixture of isomers) | 1330-20-7 | TWA : Time weighted average | (100 ppm) | 2008 | ACGIH:US. ACGIH Threshold Limit Values |
| Xylene (mixture of isomers) | 1330-20-7 | REL : Recomm ended exposure limit (REL): | 435 mg/m3 (100 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |
| Xylene (mixture of isomers) | 1330-20-7 | REL : Recomm ended exposure limit (REL): | 435 mg/m3 (100 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |
| Xylene (mixture of isomers) | 1330-20-7 | REL : Recomm ended exposure limit (REL): | 435 mg/m3 (100 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |
| Xylene (mixture of isomers) | 1330-20-7 | STEL : Short term exposure limit | 655 mg/m3 (150 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |
| Xylene (mixture of isomers) | 1330-20-7 | STEL : Short term exposure limit | 655 mg/m3 (150 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |

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|-----------------------------|-----------|--|------------------------|------------|---|
| Xylene (mixture of isomers) | 1330-20-7 | STEL : Short term exposure limit | 655 mg/m3 (150 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |
| Xylene (mixture of isomers) | 1330-20-7 | PEL : Permissible exposure limit | 435 mg/m3 (100 ppm) | 02 2006 | OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) |
| Xylene (mixture of isomers) | 1330-20-7 | STEL : Short term exposure limit | 655 mg/m3 (150 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000) |
| Xylene (mixture of isomers) | 1330-20-7 | TWA : Time weighted average | 435 mg/m3 (100 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000) |
| Ethylbenzene | 100-41-4 | TWA : Time weighted average | (20 ppm) | 12 2010 | ACGIH:US. ACGIH Threshold Limit Values |
| Ethylbenzene | 100-41-4 | REL : Recommended exposure limit (REL): | 435 mg/m3 (100 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |
| Ethylbenzene | 100-41-4 | STEL : Short term exposure limit | 545 mg/m3 (125 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |

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| Ethylbenzene | 100-41-4 | PEL : Permissible exposure limit | 435 mg/m ³ (100 ppm) | 02 2006 | OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) |
| Ethylbenzene | 100-41-4 | STEL : Short term exposure limit | 545 mg/m ³ (125 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000) |
| Ethylbenzene | 100-41-4 | TWA : Time weighted average | 435 mg/m ³ (100 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000) |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------------|--|
| Physical state | : liquid |
| Color | : clear and colourless to light yellow |
| Odor | : aromatic |
| pH | : Note: Not applicable |
| Melting point (decomposition) | : Note: no data available |
| Boiling point/boiling range | : 137.8 - 143.9 °C at 1,013 hPa |
| Flash point | : 81.0 °F (27.2 °C) |
| Lower explosion limit | : 1.1 %(V) |
| Upper explosion limit | : Note: no data available |

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| Vapor pressure | : 8.5 hPa at 20 °C(68 °F) |
| Vapor density | : 3.7 Note: (Air = 1.0) |
| Density | : 0.8662 g/cm ³ at 20 °C 0.8618 g/cm ³ at 25 °C |
| Water solubility | : Note: negligible |
| Ignition temperature | : 510 °C |

SECTION 10. STABILITY AND REACTIVITY

| | |
|------------------------------------|---|
| Chemical stability | : Stable under recommended storage conditions. |
| Possibility of hazardous reactions | : Hazardous polymerisation does not occur. |
| Conditions to avoid | : Heat, flames and sparks. Keep away from direct sunlight. |
| Incompatible materials to avoid | : Strong oxidizing agents Strong acids Alkalis May attack many plastics, rubbers and coatings. |
| Hazardous decomposition products | : In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO ₂) |

SECTION 11. TOXICOLOGICAL INFORMATION

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|--|---|
| Acute oral toxicity Xylene (mixture of isomers) | : LD50: 4,300 mg/kg Species: Rat |
| Ethylbenzene | : LD50: 3,500 - 4,700 mg/kg Species: Rat |
| Acute inhalation toxicity | : Acute toxicity estimate: > 40 mg/l , vapour Exposure time: 4 h Method: Calculation method |
| Acute dermal toxicity | : Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method |
| Skin irritation Xylene (mixture of isomers) | : Species: Rabbit Result: Moderate skin irritation Method: Draize Test |
| Ethylbenzene | : Species: Rabbit Result: Moderate skin irritation |
| Eye irritation Xylene (mixture of isomers) | : Species: Rabbit Result: slight irritation Method: Draize Test |
| Ethylbenzene | : Species: Rabbit Result: slight irritation |
| Genotoxicity in vitro Xylene (mixture of isomers) | : Test Method: Ames test Metabolic activation: with and without metabolic activation Result: negative |
| Ethylbenzene | : Test Method: Ames test Metabolic activation: with and without metabolic activation Result: negative |
| | : Cell type: Mouse lymphoma cells |

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Result: positive

Genotoxicity in vivo

Xylene (mixture of isomers) : Species: Mouse
Cell type: Micronucleus
Application Route: Oral
Result: negative

Ethylbenzene : Species: Mouse
Cell type: Micronucleus
Application Route: Inhalation
Result: negative

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish

Xylene (mixture of isomers) : static test
LC50: 26.7 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Ethylbenzene

: static test
LC50: 4.2 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 203

flow-through test
LC50: 12.1 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates

Ethylbenzene : static test
EC50: 1.81 - 2.38 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

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Toxicity to algae

Ethylbenzene

: Growth rate
EC50: 3.6 mg/l
Exposure time: 96 h
Species: Pseudokirchneriella subcapitata (green algae)

Further information on ecology

Additional ecological information

: Harmful to aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

: Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1307
Proper shipping name : XYLENES
Class : 3
Packing group : III
Hazard Labels : 3

IATA UN/ID No. : UN 1307
Description of the goods : XYLENES
Class : 3
Packaging group : III
Hazard Labels : 3
Packing instruction (cargo aircraft) : 366
Packing instruction (passenger aircraft) : 355
Packing instruction (passenger aircraft) : Y344

IMDG UN/ID No. : UN 1307
Description of the goods : XYLENES
Class : 3
Packaging group : III
Hazard Labels : 3
EmS Number : F-E, S-D


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Marine pollutant : no

SECTION 15. REGULATORY INFORMATION
Inventories

- US. Toxic Substances Control Act : On TSCA Inventory
- Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory
- Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL
- Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory
- Korea. Toxic Chemical Control Law (TCCL) List : On the inventory, or in compliance with the inventory
- Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory
- China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory
- New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

- US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):
- Reportable quantity: 100 lbs
- : Xylene (mixture of isomers) 1330-20-7

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* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 03/22/2016

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group