

SECTION 1: Identification

1.1. Identification

| | |
|--------------|--|
| Product form | : Mixture |
| Product name | : Xylene |
| CAS No | : 1330-20-7 |
| Formula | : C ₈ H ₁₀ |
| Synonyms | : AMSCO / benzene, dimethyl- / byk 310 / dimethylbenzene, mixture of isomers / dimethylbenzol, mixture of isomers / formula No 00651 / mebon thinner type 2 / methyltoluene, mixture of isomers / mixed xylenes / paint / solvent xylene / violet 3 / xilenos / xylene / xylene, mixed isomers, pure / xylenes / Xylenes / xylo / xylo, mixture of isomers |
| BIG no | : 10942 |

1.2. Relevant identified uses of the substance or mixture and uses advised against

| | |
|------------------------------|---|
| Use of the substance/mixture | : Solvent Cleansing product Chemical raw material |
|------------------------------|---|

1.3. Details of the supplier of the safety data sheet

Chemical Consultants Inc.
1600 Ratcliff Drive
Gillette, WY 82716 - United States
T 307-686-2141 - F 307-686-1106
www.chemicalconsultants.com

1.4. Emergency telephone number

| | |
|------------------|---------------------------|
| Emergency number | : INFOTRAC 1-800-424-5571 |
|------------------|---------------------------|

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

| | |
|--|------|
| Flammable liquids Category 3 | H226 |
| Acute toxicity (dermal) Category 4 | H312 |
| Acute toxicity (inhalation:vapour) Category 4 | H332 |
| Skin corrosion/irritation Category 2 | H315 |
| Serious eye damage/eye irritation Category 2A | H319 |
| Carcinogenicity Category 2 | H351 |
| Reproductive toxicity Category 2 | H361 |
| Specific target organ toxicity (repeated exposure) Category 1 | H372 |
| Hazardous to the aquatic environment - Acute Hazard Category 2 | H401 |
| Hazardous to the aquatic environment - Chronic Hazard Category 2 | H411 |

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H226 - Flammable liquid and vapor
H312+H332 - Harmful in contact with skin or if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)
H361 - Suspected of damaging fertility or the unborn child (Dermal, Inhalation, oral)
H372 - Causes damage to organs (blood, eyes, genital organs, liver, lung/respiratory system,

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| | |
|-----------------------------------|--|
| Precautionary statements (GHS-US) | retina) through prolonged or repeated exposure H401 - Toxic to aquatic life H411 - Toxic to aquatic life with long lasting effects : P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P210 - Keep away from open flames, sparks. - No smoking P233 - Keep container tightly closed P240 - Ground/bond container and receiving equipment P241 - Use explosion-proof electrical, lighting, ventilating equipment P242 - Use only non-sparking tools P243 - Take precautionary measures against static discharge P260 - Do not breathe fume, vapors P261 - Avoid breathing fume, vapors P264 - Wash hands thoroughly after handling P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area P273 - Avoid release to the environment P280 - Wear eye protection, protective gloves P302+P352 - If on skin: Wash with plenty of water P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308+P313 - If exposed or concerned: Get medical advice/attention P312 - Call a POISON CENTER if you feel unwell P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment (see First aid measures on this label) P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P370+P378 - In case of fire: Use carbon dioxide (CO2), dry extinguishing powder, foam to extinguish P391 - Collect spillage P403+P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation |
|-----------------------------------|--|

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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| Name | Product identifier | % | GHS-US classification |
|--------------|--------------------|----|--|
| Xylene | (CAS No) 1330-20-7 | 79 | Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT RE 1, H372 Aquatic Acute 2, H401 Aquatic Chronic 2, H411 |
| ethylbenzene | (CAS No) 100-41-4 | 20 | Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:vapour), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 |
| toluene | (CAS No) 108-88-3 | 1 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 |

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink. IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. 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.
- First-aid measures after ingestion : Rinse mouth with water. Do not induce vomiting. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Central nervous system depression. Dizziness. Headache. Coordination disorders. Disturbed motor response. Impaired memory. Disturbances of consciousness.
- Symptoms/injuries after skin contact : Tingling/irritation of the skin. Irritation.
- Symptoms/injuries after eye contact : Irritation of the eye tissue. Eye irritation.
- Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Enlargement/affection of the liver. Symptoms similar to those listed under inhalation.
- Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Itching.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide. Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium.

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5.2. Special hazards arising from the substance or mixture

- Fire hazard : DIRECT FIRE HAZARD. Flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May build up electrostatic charges: risk of ignition. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. Reactions involving a fire hazard: see "Reactivity Hazard". Flammable liquid and vapor.
- Explosion hazard : DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".
- Reactivity : Upon combustion: CO and CO₂ are formed. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts with (some) acids. Flammable liquid and vapor.

5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Face-shield. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus. See "Material-Handling" to select protective clothing.
- Emergency procedures : Mark the danger area. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation. In case of reactivity hazard: consider evacuation. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills. Heating: dilute combustible gas/vapour with water curtain. Collect spillage.
- Methods for cleaning up : Take up liquid spill into absorbent material. Take up liquid spill into a non combustible material e.g.: sand, earth, vermiculite or powdered limestone. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. halogens. highly flammable materials.
- Storage area : Store in a cool area. Ventilation at floor level. Fireproof storeroom. Provide for a tub to collect spills. Provide the tank with earthing. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Xylene (1330-20-7) | | |
|-------------------------|-------------------------------------|--|
| ACGIH | ACGIH TWA (ppm) | 100 ppm |
| ACGIH | ACGIH STEL (ppm) | 150 ppm |
| ACGIH | Remark (ACGIH) | URT & eye irr; CNS impair |
| OSHA | OSHA PEL (TWA) (mg/m ³) | 435 mg/m ³ |
| OSHA | OSHA PEL (TWA) (ppm) | 100 ppm |
| ethylbenzene (100-41-4) | | |
| ACGIH | ACGIH TWA (ppm) | 20 ppm (Ethyl benzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| ACGIH | Remark (ACGIH) | URT irr; kidney dam (nephropathy) |
| OSHA | OSHA PEL (TWA) (mg/m ³) | 435 mg/m ³ |
| OSHA | OSHA PEL (TWA) (ppm) | 100 ppm |
| toluene (108-88-3) | | |
| ACGIH | ACGIH TWA (ppm) | 20 ppm (Toluene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| ACGIH | Remark (ACGIH) | Visual impair; female repro; |
| OSHA | Remark (OSHA) | (2) See Table Z-2. |

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.

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Personal protective equipment : Gloves. Safety glasses.



Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: PVA. viton. tetrafluoroethylene. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: butyl rubber. natural rubber. neoprene. polyethylene. nitrile rubber.

Hand protection : Gloves.

Eye protection : Face shield. Safety glasses.

Skin and body protection : Protective clothing.

Respiratory protection : Wear gas mask with filter type A if conc. in air > exposure limit. Wear respiratory protection.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Appearance | : Liquid. |
| Color | : Colourless to light yellow |
| Odor | : Pleasant odour Aromatic odour |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : 275 - 293 °F |
| Critical temperature | : 346 - 359 °C |
| Critical pressure | : 35160 - 37100 hPa |
| Flash point | : 77 °F |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Relative evaporation rate (ether=1) | : 9.2 - 13.5 |
| Flammability (solid, gas) | : No data available |
| Explosion limits | : 1.0 - 7.0 vol % 44 - 310 g/m ³ |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Vapor pressure | : 6.7 - 8.7 hPa (20 °C) |
| Vapor pressure at 50 °C | : 32 - 43 hPa (50 °C) |
| Relative density | : 0.86 - 0.88 |
| Relative vapor density at 20 °C | : 3.7 |
| Relative density of saturated gas/air mixture | : 1.02 |
| Specific gravity / density | : 861 - 880 kg/m ³ |
| Molecular mass | : 106.17 g/mol |
| Solubility | : Insoluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in petroleum spirit. Water: < 0.02 g/100ml Ethanol: Complete Ether: Complete |
| Log Pow | : 3.2 (Conclusion by analogy; 20 °C) |
| Auto-ignition temperature | : 867.2 °F |
| Decomposition temperature | : No data available |
| Viscosity | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |

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9.2. Other information

| | |
|--------------------------|--|
| Minimum ignition energy | : 0.2 mJ |
| Specific conductivity | : 0.1 pS/m |
| Saturation concentration | : (20°C) 29/37 |
| VOC content | : 100 % |
| Other properties | : Gas/vapour heavier than air at 20°C. Clear. Physical properties depending on the composition. Slightly volatile. May generate electrostatic charges. |

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO₂ are formed. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts with (some) acids. Flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Dermal: Harmful in contact with skin. Inhalation:vapour: Harmful if inhaled.

| Xylene (1330-20-7) | |
|--------------------------------|---|
| LD50 oral rat | 3523 - 8600 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; 3523 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value; >4000 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value) |
| LD50 dermal rabbit | > 4200 mg/kg body weight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity) |
| LC50 inhalation rat (mg/l) | 29 mg/l/4h (Rat; Experimental value; 27.57 mg/l/4h; Rat; Experimental value) |
| ATE US (oral) | 3523.000 mg/kg body weight |
| ATE US (dermal) | 1100.000 mg/kg body weight |
| ATE US (vapors) | 11.000 mg/l/4h |
| ATE US (dust, mist) | 29.000 mg/l/4h |
| ethylbenzene (100-41-4) | |
| LD50 oral rat | 3500 mg/kg (Rat; Other; Experimental value) |
| LD50 dermal rabbit | 15415 mg/kg (Rabbit; Literature study; Other; 15432 mg/kg; Rabbit; Experimental value) |
| LC50 inhalation rat (mg/l) | 17.8 mg/l/4h (Rat; Literature study) |
| LC50 inhalation rat (ppm) | 4000 ppm/4h (Rat; Literature study) |
| ATE US (oral) | 3500.000 mg/kg body weight |
| ATE US (dermal) | 15415.000 mg/kg body weight |
| ATE US (gases) | 4000.000 ppmV/4h |
| ATE US (vapors) | 17.800 mg/l/4h |
| ATE US (dust, mist) | 17.800 mg/l/4h |
| toluene (108-88-3) | |
| LD50 oral rat | > 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 5580 mg/kg bodyweight; Rat; Experimental value) |
| LD50 dermal rabbit | 12223 mg/kg (Rabbit; Literature study; Other; >5000 mg/kg bodyweight; Rabbit; Experimental value) |
| LC50 inhalation rat (mg/l) | > 20 mg/l/4h (Rat; Literature study) |
| ATE US (dermal) | 12223.000 mg/kg body weight |

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| | |
|-----------------------------------|---|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Suspected of causing cancer (Dermal, Inhalation, oral). |

| | |
|---------------------------|----------------------|
| Xylene (1330-20-7) | |
| IARC group | 3 - Not classifiable |

| | |
|---------------------------|----------------------|
| Xylene (1330-20-7) | |
| IARC group | 3 - Not classifiable |

| | |
|--------------------------------|--------------------------------------|
| ethylbenzene (100-41-4) | |
| IARC group | 2B - Possibly carcinogenic to humans |

| | |
|---------------------------|----------------------|
| toluene (108-88-3) | |
| IARC group | 3 - Not classifiable |

| | |
|--|---|
| Reproductive toxicity | : Suspected of damaging fertility or the unborn child (Dermal, Inhalation, oral). |
| Specific target organ toxicity (single exposure) | : Not classified |
| Specific target organ toxicity (repeated exposure) | : Causes damage to organs (blood, eyes, genital organs, liver, lung/respiratory system, retina) through prolonged or repeated exposure. |
| Aspiration hazard | : Not classified |
| Symptoms/injuries after inhalation | : EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Central nervous system depression. Dizziness. Headache. Coordination disorders. Disturbed motor response. Impaired memory. Disturbances of consciousness. |
| Symptoms/injuries after skin contact | : Tingling/irritation of the skin. Irritation. |
| Symptoms/injuries after eye contact | : Irritation of the eye tissue. Eye irritation. |
| Symptoms/injuries after ingestion | : AFTER ABSORPTION OF HIGH QUANTITIES: Enlargement/affection of the liver. Symptoms similar to those listed under inhalation. |
| Chronic symptoms | : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Itching. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|---|
| Ecology - general | : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC. Toxic to aquatic life with long lasting effects. Toxic to aquatic life. |
| Ecology - air | : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/l. |
| Ecology - water | : Fouling to shoreline. Ground water pollutant. Toxic to fishes. Toxic to invertebrates (Daphnia). Toxic to algae. Not harmful to activated sludge. |

| | |
|--------------------------------|--|
| ethylbenzene (100-41-4) | |
| LC50 fish 2 | 4.2 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri; Semi-static system; Fresh water; Experimental value) |

12.2. Persistence and degradability

| | |
|-------------------------------|---|
| Xylene (1330-20-7) | |
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available. Photolysis in the air. |

| | |
|---------------------------------|--|
| ethylbenzene (100-41-4) | |
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil. |
| Biochemical oxygen demand (BOD) | 1.44 g O ₂ /g substance (20d.) |
| Chemical oxygen demand (COD) | 2.1 g O ₂ /g substance |
| ThOD | 3.17 g O ₂ /g substance |
| BOD (% of ThOD) | 45.4 (20 days) |

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| toluene (108-88-3) | |
|---------------------------------|--|
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil. |
| Biochemical oxygen demand (BOD) | 2.15 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 2.52 g O ₂ /g substance |
| ThOD | 3.13 g O ₂ /g substance |
| BOD (% of ThOD) | 0.69 |

12.3. Bioaccumulative potential

| Xylene (1330-20-7) | |
|---------------------------|--|
| BCF fish 2 | 7 - 26 (BCF; 8 weeks; Oncorhynchus mykiss; Flow-through system; Fresh water) |
| Log Pow | 3.2 (Conclusion by analogy; 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| ethylbenzene (100-41-4) | |
|--------------------------------|--|
| BCF fish 1 | 1 (BCF; Other; 6 weeks; Oncorhynchus kisutch; Flow-through system; Salt water; Literature study) |
| BCF fish 2 | 15 - 79 (BCF) |
| BCF other aquatic organisms 1 | 4.68 (BCF) |
| Log Pow | 3.15 (Experimental value; 3.6; Experimental value; EU Method A.8: Partition Coefficient; 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| toluene (108-88-3) | |
|---------------------------|--|
| BCF fish 2 | 90 (BCF; 72 h; Leuciscus idus; Static system; Fresh water) |
| Log Pow | 2.73 (Experimental value; Other; 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

12.4. Mobility in soil

| Xylene (1330-20-7) | |
|---------------------------|---|
| Ecology - soil | May be harmful to plant growth, blooming and fruit formation. |

| ethylbenzene (100-41-4) | |
|--------------------------------|--|
| Surface tension | 0.029 N/m |
| Log Koc | log Koc,PCKOCWIN v1.66; 2.71; Calculated value; Koc; PCKOCWIN v1.66; 517.8; Calculated value |

| toluene (108-88-3) | |
|---------------------------|------------------|
| Surface tension | 0.03 N/m (20 °C) |

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Incinerate under surveillance with energy recovery. Do not discharge into surface water.

Additional information : LWCA (the Netherlands): KGA category 03. Hazardous waste according to Directive 2008/98/EC. Flammable vapors may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1307 Xylenes, 3, III

Xylene

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

UN-No.(DOT) : UN1307
Proper Shipping Name (DOT) : Xylenes
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger
Dangerous for the environment : Yes
Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)
T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel
Other information : No supplementary information available.

TDG

No additional information available

Transport by sea

UN-No. (IMDG) : 1307
Proper Shipping Name (IMDG) : XYLENES
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : III - substances presenting low danger
EmS-No. (1) : F-E
EmS-No. (2) : S-D

Air transport

UN-No. (IATA) : 1307
Proper Shipping Name (IATA) : Xylenes
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : III - Minor Danger

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SECTION 15: Regulatory information

15.1. US Federal regulations

| Xylene (1330-20-7) | |
|--|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 | |
| CERCLA RQ | 1000 lb |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard Delayed (chronic) health hazard |

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| | | |
|--------------|------------------|-----|
| Xylene | CAS No 1330-20-7 | 79% |
| ethylbenzene | CAS No 100-41-4 | 20% |
| toluene | CAS No 108-88-3 | 1% |

| Xylene (1330-20-7) | |
|-------------------------------------|--|
| CERCLA RQ | 1000 lb |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard Delayed (chronic) health hazard |

| ethylbenzene (100-41-4) | |
|--------------------------------|---------|
| CERCLA RQ | 1000 lb |

| toluene (108-88-3) | |
|---------------------------|---------|
| CERCLA RQ | 1000 lb |

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

| ethylbenzene (100-41-4) | |
|--|--|
| Listed on IARC (International Agency for Research on Cancer) | |

15.3. US State regulations

| Xylene (1330-20-7) | |
|----------------------------|---|
| State or local regulations | U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List |

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

| ethylbenzene (100-41-4) | | | | |
|---|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | Non-significant risk level (NSRL) |
| Yes | No | No | No | 54 |

| toluene (108-88-3) | | | | |
|---|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | Non-significant risk level (NSRL) |
| No | Yes | Yes | Yes | 7000 |

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Xylene (1330-20-7)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

ethylbenzene (100-41-4)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

toluene (108-88-3)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases:

| | |
|------|---|
| H225 | Highly flammable liquid and vapor |
| H226 | Flammable liquid and vapor |
| H304 | May be fatal if swallowed and enters airways |
| H312 | Harmful in contact with skin |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H336 | May cause drowsiness or dizziness |
| H351 | Suspected of causing cancer |
| H361 | Suspected of damaging fertility or the unborn child |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H401 | Toxic to aquatic life |
| H411 | Toxic to aquatic life with long lasting effects |

NFPA health hazard

: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

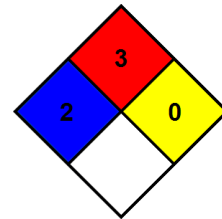
Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection

: B

B - Safety glasses, Gloves



SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product