

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Xylenes
CAS number	106-42-3
Synonyms	Mixed Xylenes

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

Identified uses	Laboratory Chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids	Category 3
Acute Dermal Toxicity	Category 4
Acute Inhalation Toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious eye damage/Eye irritation	Category 2B
Carcinogenicity	Category 2

Reproductive Toxicity	Category 2
Specific Target Organ Toxicity (single exposure)	Category 3
Specific Target Organ Toxicity (repeated exposure)	Category 2
Aspiration Hazard	Category 1
Acute Aquatic Hazard	Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Flammable liquid and vapor.
Harmful in contact with skin or if inhaled.
Causes skin irritation.
Causes eye irritation.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs (auditory organs, central nervous system, kidney, liver) through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Toxic to aquatic life.

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 mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response: If exposed or concerned, get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. 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. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
Fire: In case of fire, use appropriate media to extinguish.
Storage: Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Xylene	Methyl toluene; Xylol	1330-20-7	80-90%
Ethylbenzene	Ethylbenzol	100-41-4	10-19%
Toluene	Methylbenzene; Toluol	108-88-3	<5%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
In case of eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
If swallowed	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs

4.2 Most important symptoms and effects, both acute and delayed

Aspiration may cause pulmonary edema and pneumonitis. Be aware that symptoms of chemical pneumonia (shortness of breath) may occur several hours after exposure. May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. May cause respiratory irritation. Skin irritation. May cause redness and pain. Edema. Jaundice. Prolonged exposure may cause chronic effects.

4.3 Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water fog. Foam. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Specific hazards arising from the substance or mixture

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides.

5.3 Special protective equipment and precautions for firefighters

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials.

5.4 Further information

Flash Point 79.0 °F (26.1 °C) Closed Cup

Autoignition Temperature 982.4 °F (528 °C)

Explosion limits

Upper 7 % v/v

Lower 1.1 % v/v

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.

6.2 Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

6.3 Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is immiscible with water and will spread on the water surface. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see Section 13 of the SDS.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Hygiene measures

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials.

Incompatibilities

Strong acids. Strong oxidizing agents. Halogens.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Xylene	PEL	435 mg/m ³ 100 ppm
Ethylbenzene	PEL	435 mg/m ³ 100 ppm
Toluene	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Component	Type	Value
Xylene	STEL	150 ppm
	TWA	100 ppm
Ethylbenzene	TWA	20 ppm
Toluene	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Xylene	STEL	655 mg/m3 150 ppm
	TWA	435 mg/m3 100 ppm
Ethylbenzene	STEL	545 mg/m3 125 ppm
	TWA	435 mg/m3 100 ppm
Toluene	STEL	560 mg/m3 150 ppm
	TWA	375 mg/m3 100 ppm

ACGIH Biological Exposure Indices

Component	Determinant	Specimen	Value
Xylene	Methylhippuric acids	Creatinine in urine	1.5 g/g
Ethylbenzene	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	0.15 g/g
Toluene	o-Cresol, with hydrolysis Toluene Toluene	Creatinine in urine	0.3 mg/g
		Urine	0.03 mg/l
		Blood	0.02 mg/l

8.2 Exposure controls**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Personal protective equipment**Eye/face protection**

Chemical goggles are recommended.

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Body Protection

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Wear appropriate thermal protective clothing, when necessary.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with organic vapor cartridge.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Not available
Odor Threshold	Not available
pH	Not available
Melting Point/Range	< 32 °F (< 0 °C)
Boiling Point/Range	278.6 - 284 °F (137 - 140 °C)
Evaporation Rate	Not available
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	7 % v/v
Lower	1.1 % v/v
Vapor Pressure	Not available
Vapor Density	Not available
Density	0.86 g/cm ³
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	3.15
Autoignition Temp	982.4 °F (528 °C)
Decomposition Temp	Not available
Viscosity	Not available
Molecular Formula	N/A
Molecular Weight	N/A
VOC Content(%)	Not available
Oxidizing properties	Not oxidizing

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5 Incompatible materials

Strong acids. Strong oxidizing agents. Halogens.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethylbenzene	3500-4700 mg/kg (Rat)	15400 mg/kg (Rabbit)	17.4 mg/l, 4 hours (Rat)
Toluene	-	12200 mg/kg (rabbit)	28.1 mg/l, 4 hours (rat)
Xylene	3523 mg/kg (Rat)	-	-

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes eye irritation.

Respiratory or skin sensitization

Not a respiratory sensitizer. This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Ethylbenzene	100-41-4	Group 2B	Not listed	A3	X	A3
Toluene	108-88-3	Group 3	Not listed	Not listed	Not listed	Not listed
Xylene	1330-20-7	Group 3	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure

May cause damage to organs (auditory organs, central nervous system, kidney, liver) through prolonged or repeated exposure.

Reproductive toxicity

Suspected of damaging fertility or the unborn child. Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.

Chronic effects

May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects

11.2 Additional Information

Aspiration hazard: may be fatal if swallowed and enters airways.

SECTION 12: Ecological information**12.1 Toxicity**

Toxic to aquatic life.

Product		Species	Test Results
Ethylbenzene	EC50	Daphnia magna	1.81 - 2.38 mg/l, 48 hours
	LC50	Oncorhynchus mykiss	4.2 mg/l, 96 hours
	EC50	Ceriodaphnia dubia	3.6 mg/l, 7 days
Toluene	EC50	Daphnia magna	11.5 mg/l, 48 hours
	LC50	Oncorhynchus kisutch	5.5 mg/l, 96 hours
	NOEC	Ceriodaphnia dubia	0.74 mg/l, 7 days
	NOEC	Oncorhynchus kisutch	1.4 mg/l, 40 days
Xylene	LC50	Oncorhynchus mykiss	2.6 mg/l, 96 hours

12.2 Persistence and degradability

No data is available on the degradability of this product.

12.3 Bio accumulative potential

See Section 9 for log Pow.

12.4 Mobility in soil

The product is insoluble in water and will spread on water surfaces.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 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.

SECTION 14: Transport information

DOT (US)

UN Number	UN1307
Proper Shipping name	Xylenes
Hazard Class	3
Packaging Group	III

IMDG

UN Number	UN1307
Proper Shipping name	Xylenes
Hazard Class	3
Packaging Group	III

IATA

UN Number	UN1307
Proper Shipping name	Xylenes
Hazard Class	3
Packaging Group	III

SECTION 15: Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed, Xylene (CAS #1330-20-7), RQ: 100 lb.

Listed, Ethylbenzene (CAS #100-41-4), RQ: 1000 lb.

Listed, Toluene (CAS #108-88-3), RQ: 1000 lb.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, Xylene (CAS #1330-20-7).

Listed, Ethylbenzene (CAS #100-41-4).

Listed, Toluene (CAS #108-88-3).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Listed, Xylene (CAS #1330-20-7).

Listed, Ethylbenzene (CAS #100-41-4).

Listed, Toluene (CAS #108-88-3).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Listed, Toluene (CAS #108-88-3).

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Xylene (CAS #1330-20-7).
Listed, Ethylbenzene (CAS #100-41-4).
Listed, Toluene (CAS #108-88-3).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Xylene (CAS #1330-20-7).
Listed, Ethylbenzene (CAS #100-41-4).
Listed, Toluene (CAS #108-88-3).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Xylene (CAS #1330-20-7).
Listed, Ethylbenzene (CAS #100-41-4).
Listed, Toluene (CAS #108-88-3).

California Proposition 65

Listed, Ethylbenzene (CAS #100-41-4).
Listed, Toluene (CAS #108-88-3).

SECTION 16: Other information

Date of Issue:09/27/2018
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SECTION 17: Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.