TRADEASIA INTERNATIONAL PTE LTD
133 Cecil Street # 12-03 Keck Seng Tower, Singapore 069535,
Republic Of Singapore
Tel. +65 6227 6365 - **Fax**. +65 6225 6286
www.chemtradeasia.com

Material Safety Data Sheet

Xylene

Section 1 - Chemical Product and Company Identification

MSDS Name : Xylene

Synonyms : Dimethyl benzenes, Xylols

Company Identification : Tradeasia International Pte Limited
133 Cecil Street # 12-03 Keck Seng Tower, Singapore
Phone: +65-6227 6365
Fax: +65-6225 6286
Email: contact@chemtradeasia.com

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
1330-20-7	Xylene	100 %

Section 3 - Hazards Identification

Health Hazard Data: Harmful by inhalation and in contact with skin. Vapors may cause drowsiness and dizziness. Slightly irritating to respiratory system. Irritating to skin. Moderately irritating to the eyes. Harmful: may cause lung damage if swallowed. Possibility of organ or organ system damage from prolonged exposure; see Chapter 11 for details. Target organ(s): Central nervous system (CNS). Auditory system.

Safety Hazards: Highly flammable. In use, may form flammable/explosive vapor-air mixture. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Environmental Hazards: Toxic to aquatic organisms.

Section 4 - First Aid Measures

General Information: Keep victim calm. Obtain medical treatment immediately.

Inhalation: DO NOT DELAY. Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin Contact : Remove contaminated clothing. Immediately flush skin with large amount of water for

at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye Contact : Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.

Ingestion : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Advice to Physician : Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal. Potential for cardiac sensitization, particularly in abuse situations. Hypoxia or negative inotropes may enhance these effects. Consider: oxygen therapy. Call a doctor or poison control centre for guidance.

Section 5 - Fire Fighting Measures

Clear fire area of all non-emergency personnel.

Specific Hazards: The vapor is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water. Carbon monoxide may be evolved if incomplete combustion occurs.

Extinguishing Media: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media: Do not use water in a jet.

Protective Equipment for Firefighters: Wear full protective clothing and self-contained breathing apparatus.

Additional Advice: Keep adjacent containers cool by spraying with water.

Section 6 - Accidental Release Measures

Observe all relevant local and international regulations. Avoid contact with spilled or released material. For guidance on selection of personnel protective equipment see Chapter 8 of this MSDS. See Chapter 13 for information on disposal.

Protective measures: Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and

firefighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Ventilate contaminated area thoroughly.

Clean Up Methods: For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional Advice : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Vapour may form an explosive mixture with air. See Chapter 13 for information on disposal.

Section 7 - Handling and Storage

General Precautions: Avoid breathing of or contact with material. Only use in well-ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling: Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<=1 m/sec until fill pipe submerged to twice its diameter, then <= 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Handle and open container with care in a well-ventilated area.

Storage: Vapors from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapor treatment system. Bulk storage tanks should be diked (bunded). Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Storage Temperature: Ambient.

Product Transfer: Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.

Recommended Materials: For containers, or container linings use mild steel, stainless steel.

Unsuitable Materials: Natural, butyl, neoprene or nitrile rubbers.

Container Advice: Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Additional Information: Ensure that all local regulations regarding handling and storage facilities are followed.

Section 8 - Exposure Controls, Personal Protection

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Ethylbenzene	ACGIH	TWA	100 ppm		
	ACGIH	STEL	125 ppm		
	SG OEL	TWA	100 ppm	434 mg/m3	
	SG OEL	STEL	125 ppm	543 mg/m3	
Xylene, Mixed Isomers	ACGIH	TWA	100 ppm		
	ACGIH	STEL	150 ppm		
	SG OEL	TWA	100 ppm	434 mg/m3	
	SG OEL	STEL	150 ppm	651 mg/m3	

Additional Information: Skin notation means that significant exposure can also occur by absorption of liquid through the skin and of vapor through the eyes or mucous membranes.

Exposure Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use.

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapors [boiling point >65 °C (149 °F)] meeting EN141. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Hand Protection: When handling this product, it is recommended to wear chemical resistant gloves. The choice of suitable protective gloves depends on work conditions and what chemicals are handled, but we have positive experience with gloves made of PVA. Note that PVA degrades when in contact with water. Gloves should be replaced immediately if sign of degradation is observed. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection: Chemical splash goggles (chemical monogoggles). Monogoggles (EN166)

Protective Clothing: Chemical resistant gloves/gauntlets. Where risk of splashing or in spillage clean up, use chemical resistant one-piece overall with integral hood.

Environmental Exposure Controls: Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

Section 9 - Physical and Chemical Properties

Appearance	:	Colorless Liquid
Odor	:	Aromatic hydrocarbon odor
Boiling point	:	135 - 155 °C
Flash point	:	21 – 27 °C (Abel)
Explosive limits (in air)	:	1 – 7.1 % (vol)
Auto-ignition temperature	:	432 - 530 °C (ASTM E659)
Vapour pressure (50˚ C)	:	4.5 kPa
Vapour pressure (20˚ C)	:	0.8 – 1.2 kPa

Vapour pressure (0˚ C)	:	0.2 kPa
Specific gravity (15˚C/15˚C)	:	0.870 kg/dm3 (ASTM D1298)
Water solubility	:	0.175 kg/m3
Solubility in other solvents	:	Miscible
Kinematic viscosity	:	< 0.9mm2/s at 20˚ C
Vapour density (air=1)	:	3.7
Molecular Weight	:	106 g/mol
Evaporation Rate (n-Bu Acetate=1):		0.76 (ASTM D3539)

Section 10 - Stability and Reactivity

Stability : Stable under normal conditions of use. Reacts violently with strong oxidizing agents. ☐

Conditions to Avoid : Avoid heat, sparks, open flames and other ignition sources. Prevent vapor accumulation. ☐

Materials to Avoid : Strong oxidizing agents. ☐

Hazardous Decomposition Products : Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

Section 11 - Toxicological Information

Basis for Assessment : Information given is based on product data. ☐

Acute Oral Toxicity : Low toxicity: LD50 >2000 mg/kg, Rat
Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal. ☐

Acute Dermal Toxicity : Low toxicity: LD50 >2000 mg/kg , Rabbit

Acute Inhalation Toxicity : Low toxicity: LC50 >20 mg/l / 4 hours, Rat
High concentrations may cause central nervous system depression

		resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Skin Irritation	:	Irritating to skin. ☐
Eye Irritation	:	Moderately irritating to eyes (but insufficient to classify). ☐
Respiratory Irritation	:	Inhalation of vapors or mists may cause irritation to the respiratory system. ☐
Sensitization	:	Not a skin sensitizer
Mutagenicity	:	Not mutagenic.
Reproductive Toxicity	:	Does not impair fertility
Carcinogenicity	:	Mixed xylenes contain ethyl benzene, which has shown limited evidence of a carcinogenic effect.
Repeated Dose Toxicity	:	Central nervous system: repeated exposure affects the nervous system. Effects were seen at high doses only. **Respiratory system**: repeated exposure affects the respiratory system. Effects were seen at high doses only. **Visual system**: may cause decreased color perception. These subtle changes have not been found to lead to functional color vision deficits. **Auditory system**: prolonged and repeated exposures to high concentrations have resulted in hearing loss in rats. Solvent abuse and noise interaction in the work environment may cause hearing loss.
Additional Information	:	Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest. ☐

Section 12 - Ecological Information

Acute Toxicity

Fish	:	Toxic: 1 < LC/EC/IC50 <= 10 mg/l ☐
Aquatic Invertebrates	:	Toxic: 1 < LC/EC/IC50 <= 10 mg/l
Algae	:	Toxic: 1 < LC/EC/IC50 <= 10 mg/l ☐

Mobility	:	Floats on water. If product enters soil, it will be highly mobile and may contaminate groundwater. ☐
Persistence/degradability	:	Readily biodegradable. Oxidise rapidly by photo-chemical reactions in air. ☐
Bioaccumulation	:	Does not bio accumulate significantly
Other Adverse Effects	:	In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life. ☐

Section 13 - Disposal Considerations

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

Container Disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Section 14 - Transportation Information

IMDG

Identification number	:	UN 1307
Proper shipping name	:	XYLENES ☐
Class / Division	:	3
Packing group	:	III
Marine pollutant	:	No ☐

IATA (Country variations may apply) ☐

UN No.	:	UN 1307
Proper shipping name	:	XYLENES ☐

Class / Division	:	3 ☐
Packing group	:	III

Section 15 - Regulatory Information

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

EC Label Name	: XYLENE
EC Classification	: Flammable. Harmful.
EC Symbols	: Xn Harmful.
EC Risk Phrases	: R10 Flammable. R20/21 Harmful by inhalation and in contact with skin. R38 Irritating to skin
EC Safety Phrases	: S25 Avoid contact with eyes

Section 16 - Other Information

Uses and Restrictions	:	Raw material for use in the chemical industry. Use as solvent only in industrial manufacturing processes.
MSDS Distribution	:	The information in this document should be made available to all who may handle the product.
Disclaimer	:	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.