

MATERIAL SAFETY DATA SHEET

Revision Date : 02.06.2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : XYLENE
Synonyms : Dimethyl Benzene
Product use : Petroleum solvent
UN number : 1307
MSDS Internet website : [www. hitechchemicals.co.za](http://www.hitechchemicals.co.za)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Weight%	Symbol Codes	R-Phrase Numbers
Xylene	1330-20-7	80.00 - 90.00	F, Xn	R10, R20/21, R38
Ethyl Benzene	100-41-4	10.00 - 20.00	Xn	R20, R45
Benzene	71-43-2	< 0.10	F, T	R11, R45, R48/23/24/25

See Section 15 for European Label Information.

See Section 8 for Exposure Limits (if applicable).

3. HAZARDS IDENTIFICATION

Emergency response data : Colourless Liquid. Flammable. Vapour accumulation could flash and/or explode if in contact with any ignition source. DOT ERG No. : 130

Potential health effects

Inhalation : Irritation to nose and throat occurs at exposure levels above 100 ppm. Dizziness, nausea, loss of consciousness. Visual disturbances, cardiac sensitization, and other central nervous system effects. Respiratory distress, confusion and coma in cases of significant overexposure. Excessive breathing of vapours can result in temporary liver or kidney damage.

Skin : Prolonged repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

Eye : Irritant.

Ingestion : Swallowing may result in severe gastric irritation.

Potential environmental effects : Toxic to fish, aquatic organisms and wildlife. Do not discharge into lakes, streams, ponds and ground water supply.

See Section 11 for further health effects/toxicological data.

4. FIRST AID MEASURES

Inhalation : Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with mechanical device or use

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mouth-to-mouth resuscitation with a mouthpiece.

Skin contact	:	Remove contaminated clothing. Dry wipe exposed skin and cleanse with hand cleaner, soap and water. Launder contaminated clothing before reuse. (See Section 16 - Injection Injury)
Eye contact	:	Flush thoroughly with water for at least 15 minutes. Get medical assistance.
Ingestion	:	Seek immediate medical attention. Do not induce vomiting.
Note to doctors	:	Skin contact may aggravate an existing dermatitis. Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.

5. FIRE-FIGHTING MEASURES

Extinguishing media	:	Carbon dioxide, foam, dry chemical and water fog.
Special fire fighting procedure	:	Water spray should only be used to keep fire-exposed containers cool, flush spills away from exposures, disperse vapours and protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, municipal sewers, or drinking water supply.
Special protective equipment for firefighters	:	For fires in enclosed areas, fire fighters must use Self-Contained Breathing Apparatus.
Unusual fire and explosive hazards	:	Flammable. Vapour accumulation could flash or explode if in contact with an open flame.
Products of decomposition	:	Fumes, smoke and carbon monoxide.
Flash Point	:	27 °C (ASTM D-56)
Upper Explosion Limit	:	12.3 %(V)
Lower Explosion Limit	:	1.9 %(V)
NFPA Hazard Id	:	Health: 2; Flammability: 3; Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

Procedure if material is released or spilled	:	Report spills/releases as required to appropriate authorities.
Methods for cleaning up	:	SMALL SPILLS: Eliminate all ignition sources. Remove leaking containers to detached area. Absorb on fire-retardant treated sawdust, diatomaceous earth, etc. Shovel up with spark-resistant utensils for later disposal at an approved facility, in accordance with current laws and regulations. LARGE SPILLS: Self-contained breathing apparatus must be worn during cleanup. Eliminate all sources of ignition. Shut off source, seal the leak taking normal safety precautions. Contain material and pump back to holding tank for later disposal. Transfer equipment should be explosion-proof.
Personal precautions	:	See Section 8.
Environmental precautions	:	Prevent discharges from entering municipal sewers, drains or confined spaces, which could cause explosive conditions.

7. HANDLING AND STORAGE

Safe handling advice	:	Avoid prolonged repeated skin contact. Avoid contact with eyes. Avoid inhalation of vapours or mists. Use in a well ventilated area away from all ignition sources. Avoid sparking conditions. Ground and bond all transfer equipment.
Storage information	:	This product is a static accumulator, therefore, all storage containers should be grounded and bonded. Drums should also be equipped with self-closing valves, pressure vacuum bungs and flame arresters. Outside or detached storage area, with an automatic sprinkling system, is preferred.
Storage and handling	:	Electrical equipment and fittings must comply with local fire prevention

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procedures

regulations for this class of product. Refer to national or local regulations covering safety at petroleum handling and storage areas for this product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OELs)

Components	CAS-No.	Source	TWA	Value		Notations
Xylene	1330-20-7	ACGIH TLV	LTEL	434 mg/m ³	100 ppm	A4; BEI
			STEL	651 mg/m ³	150 ppm	
		OSHA PEL	LTEL	435 mg/m ³	100 ppm	
			STEL	655 mg/m ³	150 ppm	
Ethyl Benzene	100-41-4	ACGIH	LTEL	434 mg/m ³	100 ppm	A3; BEI
			STEL	543 mg/m ³	125 ppm	
		OSHA	LTEL	435 mg/m ³	100 ppm	
			STEL	545 mg/m ³	125 ppm	
Benzene	71-43-2	ACGIH(TLV)	LTEL	1.6 mg/m ³	0.5 ppm	Skin; A1; BEI
			STEL	8 mg/m ³	2.5 ppm	
		OSHA(PEL)	LTEL	2 mg/m ³	1 ppm	
			STEL	16 mg/m ³	5 ppm	

LTEL: Long Term Exposure Limits - Time Weight Average (TWA) over 8 hours.

STEL: Short Term Exposure Limits - Time Weight Average (TWA) over 15 Minutes

Note: Limits Shown for guidance only. Follow applicable regulations.

Personal Protection Equipment (PPE)

- Engineering controls : Use in well ventilated area. Explosive-proof ventilation equipment with local exhaust is desirable.
- Respiratory protection : Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the recommended exposure limit. Self-Contained Breathing Apparatus may be required for use in confined or enclosed spaces.
- Eye protection : If eye contact is likely, normal industrial eye protection practices should be employed.
- Skin and body protection : If prolonged or repeated skin contact is likely wear solvent-resistant gloves and clothing. Good personal hygiene practices should always be followed.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Liquid.
- Colour : Colourless
- Odour : Solvent
- Solubility : Negligible
- Boiling point/range : 139 °C
- Flash Point : 27 °C (ASTM D-56)
- Vapour pressure : 14.2 hPa
- Density : 0.8650 g/cm³ @ 20 °C (ASTM D-
- Viscosity, kinematic : < 1 mm²/s @ 40 °C (ASTM D-445)

10. STABILITY AND REACTIVITY

- Stability : Stable.
- Conditions to avoid : Heat, sparks, flame and build up of static electricity.
- Materials to avoid : Halogens, strong acids, alkalis, and oxidizers.
- Hazardous decomposition : Fumes, smoke and carbon monoxide.

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11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	(Rats): Practically non-toxic (LD50: Greater than 2000 mg/kg). Based on testing of similar products and/or components.
Acute inhalation toxicity	:	(Rats): Harmful (LC50: greater than 2 but 5mg/l or less). Based on testing products and/or components.
Acute dermal toxicity	:	(Rabbits): Harmful (LD50: greater than 400 but 2000 mg/kg or less. Based on testing of similar products and/or the components.
Skin irritation	:	(Rabbits): Irritant. (Primary Irritation Index: greater than 3 but less than 6). Based on testing of similar products and/or the components.
Eye irritation	:	(Rabbits): Irritant. (Draize score: greater than 15 but less than 35). Based on testing of similar products and/or the components.
Other acute toxicity data	:	Inhalation of vapours/mists may cause respiratory irritation. Expected to be severely irritating to gastrointestinal tract.
Toxicity to reproduction	:	There are no known reproductive effects in humans exposed to xylenes. Para-xylene appears to be more toxic to developing fetuses than other isomers and may cause pre-implantation losses in animals at greater than 230 ppm. No birth defects or toxic effects on developing fetuses were observed in studies of pregnant rats exposed to 500 ppm commercial xylene. In reproductive studies at levels up to 500 ppm, no birth defects or adverse effects on fertility were observed. At 500 ppm, birth weights of the young were slightly lower than normal.
Other toxicological information	:	This product contains ethylbenzene. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as possibly carcinogenic to humans (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability	:	This product is expected to be inherently biodegradable.
Physico-chemical removability	:	Water solubility: 500 mg/l @ 20 C.
Bioaccumulation	:	Bioconcentration factor (BCF) < 100.

Ecotoxicity effects

Further information on ecology

Remarks	:	Toxic to fish, aquatic organisms and wildlife. Do not discharge into lakes, streams, ponds and ground water supply.
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13. DISPOSAL CONSIDERATIONS

Waste disposal	:	Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and considerations of product characteristics at time of disposal.
Contaminated packaging	:	Empty containers retain residue (liquid and/or vapour) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL,

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GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Other regulations : Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity, or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP).

Flash Point : 27 °C (ASTM D-56)

14. TRANSPORT INFORMATION

ADR

Proper shipping name : XYLENES
UN number : 1307
Class : 3
Letter : F
Packing group : II
Labelling number : 3
Product Reportable Quantity : 45 kg

CFR

Proper shipping name : XYLENES
UN number : 1307
Class : 3
Letter : F
Packing group : II
Labelling number : 3
Product Reportable Quantity :

IATA_C

Proper shipping name : XYLENES
UN number : 1307
Class : 3
Letter : F
Packing group : II
Labelling number : 3
Product Reportable Quantity :

IMDG

Proper shipping name : XYLENES
UN number : 1307
Class : 3
Letter : F
Packing group : II
Labelling number : 3
Product Reportable Quantity :
Marine pollutant : Marine pollutant
Medical First Aid Guide : 310
(MFAG) table
Emergency Schedule (EmS) : 3-07
number
IMDG code page number : 3292

Static Accumulator (50 : Yes
picosiemens or less)

15. REGULATORY INFORMATION

US OSHA Hazard : Product assessed in accordance with OSHA 29 CFR 1910.1200 and
Communication Standard : determined to be hazardous.

Governmental Inventory : All components comply with TSCA, EINECS/ELINCS, AICS, METI, DSL,

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Status	:	KECI, ENCS, PICCS and IECSC.
EU Labelling	:	Product is dangerous as defined by the European Union Dangerous Substances/Preparations Directives.
Symbols	:	F, Xn Flammable, Harmful
R-Phrase(s)	:	R10, R20/21, R38 Flammable., Harmful by inhalation and in contact with the skin., Irritating to the skin.
S-phrase(s)	:	S2, S25 Keep out of the reach of children., Avoid contact with eyes.
Note	:	Contains Xylene.

SARA

U.S. Superfund Amendments and Reauthorization Act SARA Title III	:	This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".
SARA (311/312) Reportable Hazard Categories	:	Fire Chronic Acute
SARA (313) Toxic Release Chemicals:	:	Ethyl Benzene (100-41-4) - Conc < 20% Xylenes (1330-20-7) - Conc > 80%

The following product ingredients are cited on the lists below

Chemical name	CAS-No.	Concentration [%]	List Citations
Xylene	1330-20-7	80.00 - 90.00	1, 10, 18, 19, 20, 21, 22, 23, 24, 25, 26
Ethyl Benzene	100-41-4	10.00 - 20.00	1, 8, 10, 18, 19, 20, 21, 23, 24, 25, 26
Benzene	71-43-2	< 0.10	1, 2, 4, 6, 9, 10, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26

Regulatory List Searched

1 = ACGIH ALL	6 = IARC 1	11 = TSCA 4	17 = CA P65	22 = MI 293
2 = ACGIH A1	7 = IARC 2A	12 = TSCA 5a2	18 = CA RTK	23 = MN RTK
3 = ACGIH A2	8 = IARC 2B	13 = TSCA 5e	19 = FL RTK	24 = NJ RTK
4 = NTP CARC	9 = OSHA CARC	14 = TSCA 6	20 = IL RTK	25 = PA RTK
5 = NTP SUS	10 = OSHA Z	15 = TSCA 12b	21 = LA RTK	26 = RI RTK

Code Key: CARC = Carcinogen; SUS = Suspected Carcinogen

16. OTHER INFORMATION

Note: Our products do not contain PCBs.

Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for any other applications. In any case, the following advice should be considered:

INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a doctor as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

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Precautionary Label Text:

CONTAINS XYLENE

WARNING!

FLAMMABLE LIQUID AND VAPOUR. RESPIRATORY IRRITATION, HEADACHE, DIZZINESS, NAUSEA, LOSS OF CONSCIOUSNESS, AND IN CASES OF EXTREME EXPOSURE, POSSIBLY DEATH. LOW VISCOSITY MATERIAL-IF SWALLOWED, MAY BE ASPIRATED AND CAN CAUSE SERIOUS OR FATAL LUNG DAMAGE.

SAFETY: Keep away from heat and flame. Avoid prolonged or repeated overexposure by skin contact or inhalation. Use with adequate ventilation. Keep container closed. Keep out of reach of children.

FIRST AID: Wash skin with soap and water. Flush eyes with water. If overcome by fumes or vapour, remove to fresh air. If ingested do not induce vomiting. If symptoms persist seek medical attention. Read and understand the MSDS before using this product.

This warning is given to comply with California Health and Safety Code 25249.6 and does not constitute an admission or a waiver of rights. Refer to product Material Safety Data Sheet for further safety and health information.

Disclaimer

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.
