PERMANITEINDUSTRIALPRODUCTS
CK 2004/045801/23

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Material Safety Data Sheet

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

Product identifier

Product name : **Xylene**
Description: Solvent

Details of the company of the safety data sheet
Company : Permanite Industrial Products
Address : Unit 17c 4/8 Rana Road, Isipingo Rail
Telephone: 0319023227

Emergency Telephone Numbers
Emergency number : 082 653 5062
Working hours : 7am –16:30pm

SECTION 2: Hazards identification

Emergency response data :	Colourless Liquid. Highly flammable. High hazard as explosive Vapours are released below ambient temperatures and may reach remote ignition sources via drains and other underground passages. Product can accumulate a static charge which may cause a fire or explosion. DOT ERG No. : 130.
GHS Classification:	
Health	
Acute inhalation toxicity	Hazard category 2. Toxic if inhaled. Danger
Acute oral toxicity	Hazard category 5. May be harmful if swallowed. Danger
Skin irritation	Hazard category 3. Causes mild skin irritation. Warning
Reproductive toxicity (Teratogenicity)	Hazard category 2. May adversely affect foetal development. Warning
STOT - single exposure	Hazard category 3. Central nervous system depressant leading to narcotic effects.
STOT - repeated exposure	Hazard category 1. Causes damage to organs. Danger
Aspiration hazard	Hazard category 1. May cause chemical pneumonitis. Danger
Environmental	
Aquatic toxicity	Hazard category 2. Very toxic to fish, aquatic organisms and wildlife.
Physical	
Flammability	Hazard category 2. Highly flammable liquid and vapour. Danger

SECTION 3: Composition/information on ingredients

Chemical Number	CAS Number	Weight %
Xylene	1330-20-7	80-90
Ethyl Benzene	100-41-4	10-20
Benzene	71-43-2	<0.1

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SECTION 4: First aid measures

General advice : If you feel unwell, seek medical advice (show the label where possible).
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 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 : Persons with neurological disease should avoid exposure to hexane.
Material if aspirated into the lungs may cause chemical pneumonitis.
Treat appropriately.

SECTION 5: Fire Fighting measures (Extinguishing media)

Extinguishing media : Carbon dioxide, foam, dry chemical and water fog.
Special fire fighting : Evacuate area. For large spills, fire fighting foam in sufficient quantities
Procedure should be applied to blanket the flammable product surface. 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 : For fires in enclosed areas, fire fighters must use Self-Contained equipment for firefighters Breathing Apparatus.
Unusual fire and explosive : EXTREMELY FLAMMABLE, HIGH HAZARD. Liquid can release considerable Hazards vapour at temperatures below ambient which readily form flammable mixtures. Vapours settle to ground level and may reach, via drains and other underground passages, ignition sources remote from the point of escape. Product can accumulate a static charge which may cause a fire or explosion.

Products of decomposition : Fumes, smoke and carbon monoxide.
Flash Point : < 27 °C (ASTM D-56)
Upper Explosion Limit (UEL) :12.3 %(V)
Lower Explosion Limit (LEL) : 1.9 %(V)
NFPA Hazard Id : Health: 2; Flammability: 3; Reactivity: 0

SECTION 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 spill from entering municipal sewers, water sources or low lying areas. Advise the relevant authorities if contaminations have occurred

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SECTION 7: Handling and storage

Safe handling advice : Harmful in contact with or if absorbed through the skin. Avoid inhalation of vapours or mists. Use in well ventilated area away from all ignition sources. This liquid is volatile and gives off invisible vapours. Either the liquid or vapour may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

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

SECTION 8: Exposure controls/personal protection

Occupational Exposure Limits (OEL's)

Components	Cas No	Source	TWA	Value		Notations
Xylene	1330-20-7	ACGIH TLV	LTEL	434 mg/m^3	100ppm	A4, BEI
			STEL	651 mg/m^3	150ppm	
		OSHA PEL	LTEL	435 mg/m^3	100ppm	
			STEL	545 mg/m3	125ppm	
Ethyl Benzene	100-41-4	ACGIH TLV	LTEL	434 mg/m^3	100ppm	A3, BEI
			STEL	543 mg/m^3	125ppm	
		OSHA PEL	LTEL	435 mg/m^3	100ppm	
			STEL	545 mg/m^3	125ppm	
Benzene	71-43-2	ACGIH TLV	LTEL	1.6 mg/m^3	0.5ppm	Skin: A1: BEI
		OSHA PEL	STEL	8 mg/m^3	2.5ppm	
			LTEL	2 mg/m^3	1 ppm	
			STEL	16 mg/m^3	5 ppm	

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STEL: Short Term Exposure Limits – Time Weighted Average (TWA) over 15 minutes

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

Personal Protective Equipment (PPE)

Engineering controls :	Use in a well-ventilated area. Explosive-proof ventilation equipment with local exhaust is desirable.
Respiratory protection :	Approved respiratory equipment must be used when mist concentrations exceed the recommended exposure limits. Respirator with a vapor filter (EN 141) is recommended.
Eye protection :	Chemical type goggles with a face shield must be worn.
Skin and body protection :	Impervious gloves must be worn. If body contact is likely, appropriate personal protective equipment must be worn. Good personal hygiene practices should always be followed.

SECTION 9: Physical and chemical properties

Appearance :	Liquid.
Colour :	Colourless
Odour :	Hydrocarbon
Solubility :	Negligible
Boiling point :	>139 °C
Flash Point :	< 27 °C (ASTM D-56)
Upper Explosion Limit (UEL) :	12.3 %(V)
Lower Explosion Limit (LEL) :	1.9 %(V)
Vapour pressure :	14.2 hPa
Relative vapour density :	3.0
Density :	0.865 g/cm3 @ 20 °C (ASTM D-4052)

Additional information. The data are subject to usual tolerances

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SECTION 10: Stability and reactivity

Stability :	Stable.
Condition to avoid :	Heat, sparks, flame and build up of static electricity.
Materials to avoid :	Strong oxidizers.
Hazardous decomposition :	Fumes, smoke and carbon monoxide products

SECTION 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. Warning Hazard category 5. Practically non-toxic, but when swallowed can cause lung damage.

Acute dermal toxicity : (Rabbits): Toxic (LD50: 50 or greater, but 300 mg/kg or less). Based on testing of similar products and/or the components. Danger Hazard category 2.

Acute inhalation toxicity : (Rats): Fatal (LC50: 0.5 or greater, but 2 mg/l or less) 4 hours. Based on testing products and/or components. Danger Hazard category 2. Toxic if inhaled.

Skin irritation : (Rabbits): Irritant. (Primary Irritation Index: greater than 3 but less than 6). Based on testing of similar products and/or the components. Warning Hazard category 3. Causes mild skin irritation.

Eye irritation : (Rabbits): Irritant. (Draize score: greater than 15 but less than 35). Based on testing of similar products and/or the components. Danger Hazard category 2A. Causes serious eye irritation.

Respiratory and skin : Not expected to be sensitizing based on tests of this product, Sensitization components, or similar products.Germ cell mutagenicity : Ames test: Negative.

Carcinogenicity : Mouse Lymphoma (L5178Y/TK+/-) Assay: Negative.

Reproductive toxicity : A two-generation reproduction study has been conducted commercial (Teratogenicity) hexane. In this study, male and female rats were exposed to commercial hexane vapour at

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concentrations of 0, 900, 3000, or 9000 ppm. No treatment-related adverse effects on reproductive performance were observed. However, at 9000 ppm, reductions in body weight and body weight gain were observed in both generations of offspring.

Specific target organ toxicity : consciousness (STOT) category 1. Respiratory irritation, dizziness, nausea and loss of - single exposure Danger Hazard

Specific target organ toxicity : This product contains n-Hexane. Overexposure may cause progressive

(STOT) - repeated exposure and potentially irreversible damage to the peripheral nervous system(peripheral neuropathy), particularly in the limbs. Paralysis mayresult. Simultaneous exposure to the vapours Methyl Ethyl Ketone (MEK)or Methyl Isobutyl Ketone (MIBK) with n-Hexane, intensifies the associated neuropathy. There is no reported human evidence that theseeffects occur when exposure is maintained below established OSHA and ACGIH limits.

Aspiration hazard : Material if aspirated into the lungs may cause chemical pneumonitis. Danger Hazard category 1.

SECTION 12: Ecological information

Ecotoxicity effects

Toxicity to fish : (Rainbow trout) LC/EC50: 8.05 mg/l at 96 hours.

Toxicity to aquatic : (Daphnia) Immobilisation (50%): >1 mg/l at 48 hours.

Organisms (Algae) Growth Inhibition (50%): >45mg/L at 3 hours.

Elimination information (persistence and degradability)

Biodegradability : The majority of the components in this product would be expected to be inherently biodegradable through photo degradation.

Mobility : Not established.

Bioaccumulation : Bioconcentration factor (BCF) < 100.

Further information on ecology

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Remarks : In the absence of specific environmental data for this product, this assessment is based on information for representative substances.

SECTION 13: Disposal considerations

Waste disposal : The product should be disposed of by supervised incineration in compliance with any applicable laws and regulations.

Contaminated packaging : Empty containers retain residue (liquid and/or vapour) and can be Dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL,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). The reportable quantity of n-hexane is 0.5kg. If this quantity is released within a 24-hour period, it is required to notify the National Response Centre immediately. [40 CFR 302.6]

Flash Point : 27 °C (ASTM D-56)

SECTION 14: Transport information

ADR

Proper shipping name : XYLENES

UN number : 1307

Class : 3

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Letter : F

Packing group : II

Labelling number : 3

CFR

Proper shipping name : XYLENES

UN number : 1307

Class : 3

Letter : F

Packing group : II

Labelling number : 3

IATA_C

Proper shipping name : XYLENES

UN number : 1307

Class : 3

Letter : F

Packing group : II

Labelling number : 3

IMDG

Proper shipping name : XYLENES

UN number : 1307

Class : 3

Letter : F

Packing group : II

Labelling number : 3

Static Accumulator (50 : Yes picosiemens or less)

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SECTION 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, Status KECI, ENCS, PICCS and IECSC.

EU Labelling : Product is dangerous as defined by the European Union Dangerous Substances/Preparations Directives.

Symbols : F, Xn

Highly flammable, Harmful

R-Phrase(s) : R10, R21/20 R38

Highly flammable., Harmful: danger of serious damage to health by prolonged exposure through inhalation.

S-Phrase(s) : S2, S25

Keep container in a well-ventilated place., Keep away from sources of ignition - No smoking., Avoid contact with skin and eyes., Do not empty into drains., Use only in well ventilated areas.

Note : Contains n-Hexane.

SARA

U.S. Superfund : This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

Amendments and Reauthorization Act SARA Title III

SARA (311/312) Reportable : Fire Chronic Acute

Hazard Categories

SARA (313) Toxic Release : Xylenes (1330-20-7) - Conc > 80%

Chemicals

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The following product ingredients are cited on the lists below

Chemical Name	Cas Number	Concentration (%)	List Citations
Xylene	1330-20-7	80-90	1,10,18,19,20,21,22,23,24,25,26
Ethyl Benzene	100-41-4	10-20	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

SECTION 16: Other 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. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. 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.

Prepared by : Permanite Industrial Products