

DATA SHEET / XYLENE

GENERAL DESCRIPTION

Name: Xylene

Other means of identification: Dimethyl Benzene

2. 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

GHS Classification:	Health
Acute inhalation toxicity:	Hazard category 4.
Acute dermal toxicity:	Hazard category 4.
Skin corrosion/irritation:	Hazard Category 2.
Eye irritation:	Hazard Category 2.
STOT - single exposure:	Hazard category 3.
STOT – repeated exposure:	Hazard Category 2.
Aspiration hazard:	Hazard Category 1
Environmental Acute toxicity:	Not classified.
Chronic toxicity:	Hazard category 3.
Physical Flammability:	Hazard category 2.
Signal Word:	DANGER

Highly flammable liquid and vapour. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled.

Harmful if in contact with skin. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways.

PREVENTION:

Do not handle until all safety precautions have been read and understood. Response: IN CASE OF FIRE: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 attention. IF ON SKIN (or hair): Immediately remove all contaminated clothing. Gently wash skin with plenty of soap and water. Launder contaminated clothing before re-use. If skin irritation occurs: Get medical attention. IF SWALLOWED: Immediately call a POISON CENTRE or doctor. Do NOT induce vomiting.



STORAGE:

Store in a well-ventilated place and keep the container cool and tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and transfer equipment. Take precautionary measures against static discharge.

DISPOSAL:

Dispose of contents/container to an approved waste disposal plant in accordance with local/regional/national/international regulation. See Section 11 for further health effects/toxicological data

COMPOSITION/INFORMATION ON INGREDIENTS

<u>CHEMICAL NAME</u>	<u>CAS-No.</u>	<u>Weight %</u>
Xylene	1330-20-7	> 70
Ethyl Benzene	100-41-4	< 20

See Section 8 for Exposure Limits (if applicable).

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 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.

FIRE-FIGHTING MEASURES:

Extinguishing media: Carbon dioxide, foam, dry chemical and water fog.

Special firefighting procedure: Water spray should only be used to keep fire-exposed containers cool, flush spills away from exposures, disperse vapors 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. Vapor accumulation could flash or explode if in contact with an open flame.

Products of decomposition: Fumes, smoke and carbon monoxide.

Flash Point: > 18 °C (ASTM D-56)

Upper Explosion Limit (UEL): 6.7 %(V)

Lower Explosion Limit (LEL): 0.8 %(V)

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.

HANDLING AND STORAGE:

Safe handling advice: Avoid prolonged repeated skin contact. Avoid contact with eyes. Avoid inhalation of vapors or mists. Use in a well ventilated area away from all ignition sources. Avoid sparking conditions. Use proper bonding and earthing procedures.

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 procedures: Electrical equipment and fittings must comply with local fire prevention regulations for this class of product. Refer to national or local regulations covering safety at petroleum handling and storage areas for this product.

EXPOSURE CONTROLS / PERSONAL PROTECTION:

Occupational Exposure Limits (OELs)

Components	CAS-No.	Source	TWA	Value	Value	Notations
Xylene	1330-20-7	ACGIH TLV	LTEL	434 mg/m ³	100 ppm	A4; BEI
			STEL	651 mg/m ³	150 ppm	
Ethyl Benzene	100-41-4	ACGIH TLV	LTEL	434 mg/m ³	20 ppm	A3; BEI

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 Protective 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. Respirator with a vapor filter (EN 141) is recommended.

Eye protection: If eye contact is likely, normal industrial eye protection practices should be employed.

Skin and body protection: Good personal hygiene practices should always be followed. If prolonged or repeated skin contact is likely wear solvent-resistant gloves and clothing.

Suitable gloves: Material: butyl-rubber

Break through time: 4 hours

Material thickness: 0.5 mm

Unsuitable gloves:

Material: Polyvinylchloride, leather, nitrile rubber/latex,
natural rubber/latex.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Liquid
Colour:	Colourless
Odour:	Aromatic
Melting point/range:	-95 - 13 °C
Boiling point:	139 °C
Flash Point:	> 18 °C (ASTM D-56)
Upper Explosion Limit (UEL):	6.7 %(V)
Lower Explosion Limit (LEL):	0.8 %(V)
Vapour pressure:	6.5 - 9.5 hPa
Density:	0.8600 - 0.8800 g/cm ³ @ 20 °C (ASTM D-4052)
Solubility:	165.8 mg/l
Viscosity, kinematic:	< 1 mm ² /s @ 40 °C (ASTM D-445)

STABILITY AND REACTIVITY:

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

TOXICOLOGICAL INFORMATION:

Acute toxicity / Components / Xylene

Acute oral toxicity:	LD50 (Rats) : 3,523 mg/kg
Acute inhalation toxicity:	LC50 (Rats) : 29 mg/l(Estimate)
Acute dermal toxicity:	LD50 (Rats) : 12,126 mg/kg(Estimate)
Ethyl Benzene	

Acute oral toxicity: LD50 (Rats) : 3,500 mg/kg
Acute inhalation toxicity: LC50 (Rats) : 17.629 mg/l
Acute dermal toxicity: LD50 (Rabbits) : 15,400 mg/kg

**Skin corrosion/irritation
Components**

Xylene

Species: Rabbits
Result: Causes skin irritation

Ethyl Benzene

Species: Rabbits
Exposure time: 24 h
Result: Skin Irritation (Rabbit)

**Eye irritation
Components**

Xylene

Result: Causes serious eye irritation

Ethyl Benzene

Result: (Rabbits): Slightly irritating

**Sensitization
Components**

Xylene

Remarks: No available data

Ethyl Benzene

Remarks: No available data

**Germ cell mutagenicity
Components**

Xylene

Remarks: No known significant effects or critical hazards



Ethyl Benzene

Remarks: No known significant effects or critical hazards

Carcinogenicity Components

Xylene

Remarks: No available data

Ethyl Benzene

Remarks: Not classifiable as a human carcinogen

Reproductive toxicity Components

Xylene

Remarks: No available data

Ethyl Benzene

Remarks: No known significant effects or critical hazards

STOT - single exposure Components

Xylene

Remarks: May cause respiratory irritation

Ethyl Benzene

Remarks: No available data

Specific target organ toxicity (STOT) - repeated exposure Components

Xylene

Remarks: No available data

Ethyl Benzene

Remarks: May cause damage to organs through prolonged or repeated exposure

Aspiration hazard

Components

Xylene

Remarks: May be fatal if swallowed and enters airways

Ethyl Benzene

Remarks: May be fatal if swallowed and enters airways

ECOLOGICAL INFORMATION:

Ecotoxicity effects

Components

Xylene

Acute toxicity: No available data

Chronic toxicity: Fish (Oncorhynchus mykiss) 56d NOEC >1.3 mg/L
Invertebrates (Ceriodaphnia dubia) 7d NOEC 1.17 mg/L

Ethyl Benzene

Acute toxicity: Fish (Menidia menidid) 96h LC50 5.1 mg/L
Invertebrates (Mysidopsis bahia) 96h LC50 2.6 mg/L
Chronic toxicity: Invertebrates (Ceriodaphnia dubia) 7d NOEL 0.96 mg/L

Persistence and degradability

Components

Xylene

Biodegradability: Readily Biodegradable

Ethyl Benzene

Biodegradability: This product is expected to be inherently biodegradable

Bioaccumulation

Components



Xylene

Bioaccumulation: BCF = 25.9

Ethyl Benzene

Bioaccumulation: Not established

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 vapor) 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.

Other regulations:

This material and any waste emanating from its use must be disposed via an appropriate method in compliance with the applicable National, regional and local legislative/ authority requirements.

Flash Point:

> 18 °C (ASTM D-56)



TRANSPORT INFORMATION:

ADR

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

CFR

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

IATA_C

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

IMDG

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



REGULATORY INFORMATION:

South African Legislation and Standards:

South African OHS Act, 85 of 1993: Hazardous Chemical Agents, Regulation 14A
National Environmental Management: Waste Act 2008 South African Guidelines
SANS 10234:2008 - Globally Harmonized System of classification & labelling of chemicals
SANS 11014:2010 - Safety data sheet for chemical products - Content & order of sections

Other regulations: Globally Harmonized System of Classification and Labelling of Chemicals (GHS) [GHS (Rev. 7) (2017)]

OTHER INFORMATION:

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.

Abbreviations That May Have Been Used In This Document:

TLV - Threshold Limit Value	TWA - Time Weighted Average
LTEL - Long-term Exposure Limit	STEL - Short-term Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists	CAS - Chemical Abstract Service Number
IMO/IMDG - International Maritime Dangerous Goods Code	SDS – Safety Data Sheet
SANS – South African National Standards	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
STOT – Specific Target Organ Toxicity	OHS Act – Occupational Health and Safety Act
NFPA - National Fire Protection Association (USA)	ECHA - European Chemicals Agency

Sources of key data used to compile the Safety Data Sheet: European Oil Company Organization for Environment, Health and Safety) ECHA (<https://echa.europa.eu/information-on-chemicals>)

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