



# Alpha Chemika



ISO 9001 QUALITY SYSTEM CERTIFIED ORGANIZATION

## MATERIAL SAFETY DATA SHEET

### MSDS

Savgan Heights ; 102 ,B Wing ; R.T.D. Lane ,Andheri (West) Mumbai - 400053 , INDIA

## Section 1 - Chemical Product and Company Identification

### Product Name : XYLENE

**Synonyms:** Dimethyl benzene, xylol, methyltoluene

**CAS No.:** 1330-20-7

**Molecular Weight:** 106.17

**Chemical Formula:** C<sub>6</sub>H<sub>4</sub>(CH<sub>3</sub>)<sub>2</sub>

## Section 2 - Composition, Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
m-Xylene	108-38-3	40 - 65%	Yes
o-Xylene	95-47-6	15 - 20%	Yes
p-Xylene	106-42-3	< 20%	Yes
Ethyl Benzene	100-41-4	15 - 25%	Yes

## Section 3 - Hazardous Identification

### Emergency Overview

**DANGER! HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES SEVERE EYE IRRITATION. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CHRONIC EXPOSURE CAN CAUSE ADVERSE LIVER, KIDNEY, AND BLOOD EFFECTS. FLAMMABLE LIQUID AND VAPOR.**

**SAF-T-DATA(tm)** Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate (Life)

Flammability Rating: 2 - Moderate

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER

Storage Color Code: Red (Flammable)

## Potential Health Effects

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### **Inhalation:**

Inhalation of vapors may be irritating to the nose and throat. Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties which may be delayed in onset. Substernal pain, cough, and hoarseness are also reported. High vapor concentrations are anesthetic and central nervous system depressants.

### **Ingestion:**

Ingestion causes burning sensation in mouth and stomach, nausea, vomiting and salivation. Minute amounts aspirated into the lungs can produce a severe hemorrhagic pneumonitis with severe pulmonary injury or death.

### **Skin Contact:**

Skin contact results in loss of natural oils and often results in a characteristic dermatitis. May be absorbed through the skin.

### **Eye Contact:**

Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.

### **Chronic Exposure:**

Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Repeated or prolonged skin contact may cause a skin rash. Repeated exposure of the eyes to high concentrations of vapor may cause reversible eye damage. Repeated exposure can damage bone marrow, causing low blood cell count. May damage the liver and kidneys.

### **Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney, blood, or respiratory function may be more susceptible to the effects of the substance

## Section 4 - First Aid Measures

### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

### **Ingestion:**

Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately.

### **Skin Contact:**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

### **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## Section 5 - Fire Fighting Measures

### **Fire:**

Flash point: 29C (84F) CC

Autoignition temperature: 464C (867F)

Flammable limits in air % by volume:

lcl: 1.0; ucl: 7.0

### **Explosion:**

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. Sensitive to static discharge.

### **Fire Extinguishing Media:**

Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

### **Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Vapors can flow along surfaces to distant ignition source and flash back.

## Section 6 - Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

## Section 7 - Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

## Section 8 - Exposure Controls, Personal Protection

### **Airborne Exposure Limits:**

-OSHA Permissible Exposure Limit (PEL):

100 ppm (TWA) xylene

100 ppm (TWA) ethylbenzene

-ACGIH Threshold Limit Value (TLV):

xylene: 100 ppm (TWA) 150 ppm (STEL), A4 - Not classifiable as a human carcinogen.

ethyl benzene: 100 ppm (TWA) 125 ppm (STEL), A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details. Use explosion-proof equipment.

### **Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded and engineering controls are not feasible, a half-face organic vapor respirator may be worn for up to ten times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. Where respirators are required, you must have a written program covering the basic requirements in the OSHA respirator standard. These include training, fit testing, medical approval, cleaning, maintenance, cartridge change schedules, etc. See 29CFR1910.134 for details.

### **Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### **Eye Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## Section 9 - Physical and Chemical Properties

The following physical data is for xylene.

**Appearance:**

Clear, colorless liquid.

**Odor:**

Characteristic odor.

**Solubility:**

Insoluble in water.

**Specific Gravity:**

0.86 @ 20C/4C

**pH:**

Not applicable.

**% Volatiles by volume @ 21C (70F):**

100

**Boiling Point:**

137 - 140C (279 - 284F)

**Melting Point:**

-25C (-13F)

**Vapor Density (Air=1):**

3.7

**Vapor Pressure (mm Hg):**

8 @ 20C (68F)

**Evaporation Rate (BuAc=1):**

0.7

## Section 10 - Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

Involvement in a fire causes formation of carbon monoxide and unidentified organic components.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong oxidizing agents and strong acids.

**Conditions to Avoid:**

Heat, flames, ignition sources and incompatibles.

## Section 11 - Toxicological Information

**Toxicological Data:**

Xylene: oral rat LD50: 4300 mg/kg; inhalation rat LC50: 5000 ppm/4H; skin rabbit LD50: > 1700 mg/kg; Irritation eye rabbit: 87 mg mild (Std. Draize); irritation skin rabbit 500 mg/24 moderate (Std. Draize); investigated as a tumorigen, mutagen, reproductive effector.

Ethyl benzene: oral rat LD50: 3500 mg/kg; skin rabbit LD50: 17800 uL/kg; investigated as a tumorigen, mutagen, reproductive effector.

**Reproductive Toxicity:**

May cause teratogenic effects.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient Known Anticipated IARC Category

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m-Xylene (108-38-3) No No 3

o-Xylene (95-47-6) No No 3

p-Xylene (106-42-3) No No 3

Ethyl Benzene (100-41-4) No No 2B

## Section 12 - Ecological Information

### **Environmental Fate:**

Following data for xylene: When released into the soil, this material may evaporate to a moderate extent. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day. This material is not expected to significantly bioaccumulate. (mixed xylenes: octanol / water partition coefficient 3.1 - 3.2; bioconcentration factor = 1.3, eels)

### **Environmental Toxicity:**

For xylene: This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

## Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## Section 14 - Transport Information

### **Domestic (Land, D.O.T.)**

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**Proper Shipping Name:** RQ, XYLENES

**Hazard Class:** 3

**UN/NA:** UN1307

**Packing Group:** III

**Information reported for product/size:** 398LB

**International (Water, I.M.O.)**

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**Proper Shipping Name:** XYLENES

**Hazard Class:** 3

**UN/NA:** UN1307

**Packing Group:** III

**Information reported for product/size:** 398LB

## Section 15 - Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient TSCA EC Japan Australia

m-Xylene (108-38-3) Yes Yes Yes Yes

o-Xylene (95-47-6) Yes Yes Yes Yes

p-Xylene (106-42-3) Yes Yes Yes Yes

Ethyl Benzene (100-41-4) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----

--Canada--

Ingredient Korea DSL NDSL Phil.

m-Xylene (108-38-3) Yes Yes No Yes

o-Xylene (95-47-6) Yes Yes No Yes

p-Xylene (106-42-3) Yes Yes No Yes

Ethyl Benzene (100-41-4) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA 302- -----SARA 313-----

Ingredient RQ TPQ List Chemical Catg.

m-Xylene (108-38-3) No No Yes No

o-Xylene (95-47-6) No No Yes No

p-Xylene (106-42-3) No No Yes No

Ethyl Benzene (100-41-4) No No Yes No

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCAIngredient

CERCLA 261.33 8(d)

m-Xylene (108-38-3) 1000 No No

o-Xylene (95-47-6) 1000 No No

p-Xylene (106-42-3) 100 No Yes

Ethyl Benzene (100-41-4) 1000 No No

Chemical Weapons Convention: No TSCA 12(b): Yes CDTA: No

SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No

Reactivity: No (Mixture / Liquid)

### **WARNING:**

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

## Section 16 - Additional Information

**NFPA Ratings:** Health: **2** Flammability: **3** Reactivity: **0**

### **Label Hazard Warning:**

DANGER! HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES SEVERE EYE IRRITATION. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CHRONIC EXPOSURE CAN CAUSE ADVERSE LIVER, KIDNEY, AND BLOOD EFFECTS. FLAMMABLE LIQUID AND VAPOR.