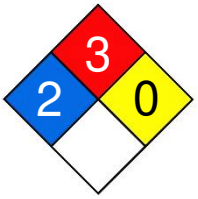
Material Safety Data Sheets



Revision 2

1. IDENTIFICATION

Product Name	**Xylene(mixture of isomers)**
Other Names	Benzene, Dimethyl-; Dimethylbenzene; Xylol
Code No	100-XY-1
Uses	Feedstock, Solvent
Chemical Family	No Data Available
Chemical Formula	C_8H_{10}
Chemical Name	Xylene
Product Description	No Data Available
Contact Information	No Data Available
Company	Arman sina.co
Contact Information	info@armansina.com www.armansina.com

2. HAZARD IDENTIFICATION

Hazard Categories	Harmful
Risk Phrases	Flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes. Repeated exposure may cause skin dryness and cracking. Vapours may cause drowsiness and dizziness.
Safety Phrases	Keep away from sources of ignition - No smoking. When using do not eat or drink. Do not breathe spray/vapour. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment.

Symbol

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Xylene	C_8H_{10}	1330-20-7	98-99%

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	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.
Eye	Quickly and gently blot material from eyes. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.
Skin	Quickly and gently blot away excess liquid. Wash gently and thoroughly with warm water (use nonabrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard.
Inhaled	If symptoms of poisoning become evident, contact a Poisons Information Centre, or call a doctor at once. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal. Potential for cardiac sensitisation, particularly in abuse situations. Hypoxia or negative inotropes may enhance these effects. Consider: oxygen therapy.
Medical Conditions Aggravated by Exposure	Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Central nervous system (CNS). Skin. Auditory system. Repeated Dose Toxicity : Central nervous system: repeated exposure affects the nervous system. Effects were seen at high doses only. 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. Mutagenicity : Not mutagenic. Carcinogenicity : Mixed xylenes contain ethylbenzene, which has shown limited evidence of a carcinogenic effect. Reproductive and Developmental Toxicity : Does not impair fertility. Causes foetotoxicity in animals at doses which are maternally toxic. Additional Information : Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest.

5. FIRE FIGHTING MEASURES

General Measures	Flame-proof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed.
Flammability Conditions	Product is a flammable liquid.
Extinguishing Media	In case of fire, use carbon dioxide, dry chemical, foam. Normal foam, i.e. protein based foam that is not alcohol resistant, is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses. Large fire: fire fighting foam or water spray, If it is not dangerous, remove containers from fire areas. Even if the fire is suppressed, continuously spray water to the heated containers. Avoid accessing to the both ends of the tank. For fire in the storage area or loading/unloading: spray water using unmanned hose supports or monitor nozzles to the heated containers to cool them. If it is not possible, consider to follow up the preventions written down. - Only authorized person can access to the hazardous and restricted areas. Let it burned all Immediately escape from the fire area if there is noise from the safe exhaust system and colour change of the tank caused by fire. Keep away at least 0.8 km (half mile) from the fire area if tanks, tank trucks, train are burning. The efficiency of water may be low.
Fire and Explosion Hazard	This product is classified as flammable. There is a moderate risk of an explosion from this product if commercial quantities are involved in a fire. Firefighters should take care and appropriate precautions. Any explosion will likely spread the fire to surrounding materials. Water spray may be used to cool drums involved in a fire, reducing the chances of an explosion. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.
Hazardous Products of Combustion	Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.
Special Fire Fighting Instructions	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit.
Flash Point	25ºC
Lower Explosion Limit	7.1 %

Upper Explosion Limit	**7.1 %**
Auto Ignition Temperature	**No Data Available**
Hazchem Code	**3Y**

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	**Shut off all possible sources of ignition. Use clean, non-sparking tools and equipment. Avoid accidents, clean up immediately. Increase ventilation. Avoid walking through spilled product as it may be slippery when spilt. Water spray may be used to cool and disperse vapours, protect personnel, and dilute spills to form non-flammable mixtures. Do NOT get water inside containers. A vapour suppressing foam may be used to reduce vapours. Water spray may reduce vapour but may not prevent ignition in closed spaces.**
Clean Up Procedures	**Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Avoid using sawdust or other combustible material. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly.**
Containment	**Stop leak if safe to do so.**
Environmental Precautionary Measures	**Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.**
Evacuation Criteria	**Evacuate all unnecessary personnel.**

Personal Precautionary Measures Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	**Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Operations should be carried out in an efficient fume hood or equivalent system. Remove contaminated clothing and wash before reuse. Discard contaminated shoes. Keep away from combustible material. Empty containers pose a fire risk, evaporate residue under a fume hood. Chemicals should be used only by those trained in handling potentially hazardous materials.**
Storage	**Store in a cool, dry, well-ventilated, fire-proof area. Keep containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Ground and bond storage containers. Store away from incompatible materials as listed in section 10. This product has a UN classification of 1307 and a Dangerous Goods Class 3 (flammable) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.**
Container	**Store in original packaging as approved by manufacturer.**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	**The following exposure standard has been established by The Australian Safety and Compensation Council (ASCC); Xylene CAS 1330-20-7: TWA = 80ppm (350mg/m3) STEL = 150ppm (655mg/m3) Ethyl Benzene CAS 100-41-4: TWA = 100pm (434mg/m3) STEL = 125ppm (543mg/m3) NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.**
Exposure Limits	**No Data Available**
Biological Limits	**No information available on biological limit values for this product.**
Engineering Measures	**A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. 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. Use explosion proof ventilation to control airborne concentrations below the exposure guidelines/limits. Firewater monitors and deluge systems are recommended. Monitoring Methods : Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For**

	some substances biological monitoring may also be appropriate. Examples of sources of recommended air monitoring methods are given below or contact supplier. Further national methods may be available.
Personal Protection Equipment	RESPIRATOR: For concentration 900 ppm use anti-poison mask (direct connection type, organic gas cartridge), Electric fan attachment respirator (organic solvent cartridge), Supplied-air respirator, Air respirator (full facepiece). Escape - Air filtration type respirator (organic gas cartridge, full facepiece), Air respirator (escape), Unknown concentration or emergency - Supplied-air respirator (complex airline mask), Air respirator (full facepiece) (AS1715/1716). EYES: Safety glasses or goggles are recommended for the eye protection from dusts or mists (AS1336/1337). HANDS: Use proper chemical resistant gloves to prevent skin contact (AS2161). CLOTHING: Chemical resistant clothing, boots, and apron (AS3765/2210).
Work Hygienic Practices	No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Characteristic odour
Colour	Colourless
pH	No Data Available
Vapour Pressure	10 hpa
Relative Vapour Density	3.7
Boiling Point	139ºC
Melting Point	-34ºC
Freezing Point	No Data Available
Solubility	No Data Available
Specific Gravity	0.876
Flash Point	25ºC
Auto Ignition Temp	No Data Available
Evaporation Rate	0.7 Butyl Acetate = 1
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	3.20
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	Product is a liquid.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available

Non-Flammables That Could Contribute Unusual Hazards to a Fire	**No Data Available**
Properties That May Initiate or Contribute to Fire Intensity	**No Data Available**
Reactions That Release Gases or Vapours	**No Data Available**
Release of Invisible Flammable Vapours and Gases	**No Data Available**

10. STABILITY AND REACTIVITY

General Information	**Flammable Liquid.**
Chemical Stability	**Product is stable under normal conditions of use, storage and temperature.**
Conditions to Avoid	**Avoid heat, sparks, open flames and other ignition sources. If containers are exposed to heat, container damage or explosion may occur. Keep away from water supply facilities and sewage.**
Materials to Avoid	**Incompatible with Strong oxidising agents, and sources of ignition.**
Hazardous Decomposition Products	**Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.**
Hazardous Polymerisation	**Hazardous Polymerisation has not been reported.**

11. TOXICOLOGICAL INFORMATION

General Information	**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 > 20mg/L / 4hours, Rat** **High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.**
EyeIrritant	**Moderately irritating to eyes (but insufficient to classify). Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Short Term Exposure: This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage. Long Term Exposure: No data for health effects associated with long term eye exposure.**
Ingestion	**High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.**
Inhalation	**Short Term Exposure: High vapour pressures may cause drowsiness and dizziness. In addition product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort. Long Term Exposure: Vapours may cause drowsiness and dizziness.**
SkinIrritant	**Harmful in contact with skin. Irritating to skin. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. Short Term Exposure: Available data shows that this product is harmful, but symptoms are not available. In addition product may be irritating, but is unlikely to cause anything more than mild transient discomfort. Long Term Exposure: Repeated exposure may cause skin dryness or cracking.**
Carcinogen Category	**No Data Available**

12. ECOLOGICAL INFORMATION

Ecotoxicity	**Toxicity to Fish: (Toxic) 1 < LC/EC/IC50 < = 10mg/L** **Invertebrates: (Toxic) 1 < LC/EC/IC50 < = 10mg/L** **Algae: (Toxic) 1 < LC/EC/IC50 < = 10mg/L** **Other: In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.**
Persistence/Degradability	**Readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.** **If product enters the soil, it will be highly mobile and may contaminate groundwater.**

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Mobility	
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	Does not bioaccumulate significantly.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local regulations. All empty packaging should be disposed of in accordance with Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. If neither of these options is suitable, consider controlled incineration, or landfill.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	XYLENES
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
ERG	130 Flammable Liquids (Non-Polar / Water-Immiscible / Noxious)
UN Number	1307
Hazchem	3Y
Pack Group	III
Special Provision	No Data Available

Sea Transport
IMDG

Proper Shipping Name	XYLENES
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1307
Hazchem	3Y
Pack Group	III
Special Provision	No Data Available
EMS	FE,SD
Marine Pollutant	No

Air Transport
IATA

Proper Shipping Name	XYLENES
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1307
Hazchem	3Y
Pack Group	III
Special Provision	223

15. OTHER INFORMATION

Revision	**2**
Key/Legend	**< Less Than** **> Greater Than** **atm Atmosphere** **CAS Chemical Abstracts Service (Registry Number)** **cm Square Centimetres** **CO2 Carbon Dioxide** **COD Chemical Oxygen Demand** **Degrees Celcius** **EPA (New Zealand) Environmental Protection Authority of New Zealand** **Degrees Farenheit** **g Grams** **g/cm Grams per Cubic Centimetre** **g/l Grams per Litre** **HSNO Hazardous Substance and New Organism** **IDLH Immediately Dangerous to Life and Health** **immiscible Liquids are insoluable in each other.** **inHg Inch of Mercury** **inH2O Inch of Water** **K Kelvin** **kg Kilogram** **kg/m Kilograms per Cubic Metre** **lb Pound** **LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.** **LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.** **ltr or L Litre** **m Cubic Metre** **mbar Millibar** **mg Milligram** **mg/24H Milligrams per 24 Hours** **mg/kg Milligrams per Kilogram** **mg/m Milligrams per Cubic Metre** **Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.** **mm Millimetre** **mmH2O Millimetres of Water** **mPa.s Millipascals per Second** **N/A Not Applicable** **NIOSH National Institute for Occupational Safety and Health** **NOHSC National Occupational Heath and Safety Commission** **OECD Organisation for Economic Co-operation and Development** **Oz Ounce** **PEL Permissible Exposure Limit** **Pa Pascal** **ppb Parts per Billion** **ppm Parts per Million** **ppm/2h Parts per Million per 2 Hours** **ppm/6h Parts per Million per 6 Hours** **psi Pounds per Square Inch** **R Rankine** **RCP Reciprocal Calculation Procedure** **STEL Short Term Exposure Limit** **TLV Threshold Limit Value** **tne Tonne** **TWA Time Weighted Average** **ug/24H Micrograms per 24 Hours** **UN United Nations** **wt Weight**