1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name : **Xylene**
Product Uses : Industrial solvent

Supplier : **S P K Chemical Co.,Ltd.**
42 Soi Charoemprakiat Rama 9 Soi 19,
NongBon, Pravet, Bangkok 10250
Telephone : +66 2 747 0580-1
Fax : +66 2 398 1609

2 HAZARDS IDENTIFICATION

GHS Classification : FLAMMABLE LIQUIDS, Category 3
ACUTE TOXICITY - ORAL, Category 5
SKIN CORROSION/IRRITATION, Category 2
ACUTE TOXICITY - INHALATION, Category 4
ACUTE TOXICITY - DERMAL, Category 4
Serious eye damage/eye irritation, Category 2A
Specific target organ toxicity-single exposure,
Category 1 (Respiratory, liver, central nervous system, kidney)
Category 3 (Drowsiness and dizziness)
Specific target organ toxicity-repeated exposure,
Category 1 (Respiratory, nervous system)
ASPIRATION HAZARD, Category 1
AQUATIC TOXICITY (ACUTE), Category 2
AQUATIC TOXICITY (Chronic), Category 2

GHS label elements
Symbol(s)



Signal word : **Danger**

GHS Hazard Statements
Physical Hazards : H226 Flammable liquid and vapor
Health Hazards : H303 May be harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

H373 May cause damage to organs or organ system through prolonged or repeated exposure.

Environmental Hazards : H401 Toxic to aquatic life.

GHS Precautionary Statements

Prevention : P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/protective clothing/eye protection/ Protection/face protection.
P264 Wash hands thoroughly after handling.
P281 Use personal protective equipment as required.
P261 Avoid breathing dust/fume/mist/vapors/spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.

Response : P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P33 Do NOT induce vomiting.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P320 Specific measures (see details on this label).
P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P370+P378: In case of fire: Use appropriate media for extinction.

Storage : P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal : P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and nation regulations.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity : Benzene, dimethyl
Synonyms : Dimethyl benzenes
Mixed xylenes
Solvent Xylene
CAS No. : 1330-20-7
EINECS No. : 215-535-7

Xylene, Mixed Isomer

Hazard Class (category)	:	Flam. Liq. (3) Acute Der Tox. (4) Acute Oral Tox. (5) Skin Irrit. (2)
Hazard statement	:	H226 , H332 , H312 , H315
Conc.	:	40-85%

Ethylbenzene

Hazard Class (category)	:	Flam. Liq. (2) Acute Tox.(4) Acute Tox. (5) Skin Corr/Irrit. (2) Eye Dam. (2A) Asp.Tox. (1) STOT SE (3) Aquatic Acute (2) STOT RE (2)
Hazard statement	:	H225, H332, H303, H315, H319, H373, H401
Conc.	:	15-60%

4 FIRST AID MEASURES

General Information	:	Keep victim clam. Obtain medical treatment immediately.
Inhalation	:	Do NOT DELAY. Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact	:	Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to nearest medical facility for additional treatment.
Eye Contact	:	Immediately flush eye with large amounts of water for at least 15 minutes While holding eyelids open. Transport to the nearest medical facility for additional treatment.
Ingestion	:	If swallowed, do not induce vomiting. Transport to the nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101^{o}F (38.3 ^{o}C), shortness of breath, chest congestion or continued coughing or wheezing. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give nothing by mouth. Do not induce vomiting.
Notes to physician		
Most important symptoms /effects, acute, and delayed	:	Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness

of breath, and/or fever.
The onset of respiratory symptoms may be delayed for several hours after exposure.
Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, lightheadedness, headache, nausea and loss of coordination.
Continued inhalation may result in unconsciousness and death.
Auditory system effects may include temporary hearing loss and/or ringing in the ears.

Immediate medical attention ,special treatment : Potential for chemical pneumonitis. Potential for cardiac sensitization, particularly in abuse situations. Hypoxia or negative in tropes may enhance these effects. Consider: oxygen therapy. Call a doctor or poison control center for guidance.

5 FIRE FIGHTING MEASURES

Specific Hazards : The vapor is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water. Carbon monoxide may be evolved if incomplete combustion occurs.

Extinguishing Media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media : Do not use water in a jet.

Protective Equipment for Fire fighters : Wear full protective clothing and self-contained breathing apparatus.

Other advice : Keep adjacent containers cool by spraying with water.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures : Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas.

Environmental Precaution : Shut off leaks, if possible without personal risks.
Remove all possible sources of ignition in the surrounding area.
Use appropriate containment(of product and fire fighting water) to avoid environmental contamination.
Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays.
Take precautionary measures against static discharge.
Ensure electrical continuity by bonding and grounding all equipment.
Ventilate contaminated area thoroughly.

Methods and material for containment and clean up : For large liquid spills(>1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal.
Do not flush away residues with water.
Retain as contaminated waste.
Allow residue to evaporate or soak up with an appropriate absorbent

material and dispose of safely.
Remove contaminated soil and dispose of safely.
For small liquid spills (<1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal.
Allow residues to evaporate or soak up with an appropriate material and dispose of safely.
Remove contaminated soil and dispose of safely.

Additional Advice : Notify authorities if any exposure to the general public or the environmental occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contaminated.
The vapor is heavier than air, spreads along the ground and distant ignition is possible. Vapor may form an explosive mixture with air.
See Chapter 13 for information on disposal.

7 HANDLING AND STORAGE

General Precaution : Avoid breathing vapors or contact with material. Only use in well ventilated areas. Wash thoroughly after handling.
On guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Precautions for safe Handling : Avoid inhaling vapor and/or mists. Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic charges may be generated during pumping. Electrostatic discharge may fire cause fire. Ensure electrically continuity by bonding and grounding (earthling) all equipment.
Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<=1m/sec until fill pipe submerged to twice its diameter, then <=7 m/sec).
Avoid splash filling. DO NOT use compressed air for filling, discharging, or handling operations. Handling Temperature: Ambient.

Conditions for safe Storage : Bulk storage tanks should be disked. Vapors from tanks should not be released to atmosphere. Breathing losses during storage be controlled by a suitable vapor treatment system. Must be stored in a disked well ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment.
The vapor is heavier than air.
Beware of accumulation in pits and confined spaces.
Storage Temperature : Ambient.

Product Transfer : Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthling) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<=1 m/sec until fill pipe submerged to twice its diameter, than <=7 m/sec). Avoid splash filling. Do NOT use compressed air

for filling, discharging, or handling operations. Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.

Recommended Materials : For containers, or container linings use mild steel, stainless steel.
Unsuitable Materials : Natural, butyl, neoprene or nitrite rubbers.
Container Advice : Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.
Other Advice : Ensure that all local regulations regarding handling and storage facilities are followed.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm
Ethylbenzene	ACGIH	TWA	20 ppm
Xylene, Mixed Isomers	ACGIH	TWA	100 ppm
		SETL	150 ppm

Individual protection Measures : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Respiratory Protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.
Check with respiratory protective equipment suppliers.
Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapours [boiling point >65 °C (149 °F)] meeting EN14387.
Where respiratory protective equipment is required, use a fullface mask. Where air-filtering respirators are unsuitable (e.g.,airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive
Hand Protection : Where hand contact with the product may occur the use of gloves approved to relevant standards made from the following materials : rubber gloves, Nature rubber gloves, Neoprene rubber gloves, Nitrite rubber gloves.
Eye Protection : Chemical splash goggles
Body Protection : Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Colorless Liquid.
Odour : Aromatic
Odour threshold : 0.27 ppm
pH : Not applicable
Boiling point : Typical 136-145^{o}C

Melting / freezing point	:	Typical > -48°C
Flash point	:	Typical 23-27°C
Auto-ignition temperature	:	495-516°C
Density	:	Typical 870 kg/m3 at 15°C
Water solubility	:	0.175 kg/m3
Vapour density (air=1)	:	3.7

10 STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions of use. Reacts violently with strong oxidizing agents.
Conditions to Avoid	:	Avoid heat, sparks, open flames and other ignition sources. Prevent vapor accumulation.
Incompatible materials	:	Strong oxidizing agents.
Hazardous Decomposition Product	:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
Sensitivity to static Discharge	:	Yes

11 TOXICOLOGICAL INFORMATION

Likely routes of exposure	:	Inhalation is the primary route of exposure although absorption may occur through skin contact or following accidental ingestion.
Acute Toxicity		
Acute Oral Toxicity	:	May be harmful if swallowed. LD50 >2000 - <=5000 mg/kg.
Acute Dermal Toxicity	:	Harmful in contact with skin.
Acute Inhalation Toxicity	:	Harmful if inhaled. LC50 >10.0 - <=20.0 mg/l.
Skin corrosion/irritation	:	Cause skin irritation.
Serious eye damage/irritations	:	Cause serious eye irritation.
Respiratory Irritation	:	Inhalation of vapours or mists may cause irritation to the respiratory system.
Respiratory or skin Sensitization	:	Not expected to be skin sensitizer.
Aspiration hazard	:	Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Reproductive and Developmental Toxicity	:	Suspected of damaging fertility or the unborn child. Does not impair fertility.

12 ECOLOGICAL INFORMATION

Acute Toxicity		
Fish	:	Toxic : LL/EL/IL50 >1 - <=10 mg/l
Aquatic Invertebrates	:	Toxic : LL/EL/IL50 >1 - <=10 mg/l
Mobility	:	Floats on water, adsorbs to soil and has low mobility.

Persistence/ degradability	:	Readily biodegradable.
Bio accumulative potential	:	Does not bio accumulate significantly.

13 DISPOSAL CONSIDERATION

Material Disposal	:	Recover or recycle if possible. It is responsibility of the waste generator to determine the toxicity and physical propoties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulation. Do not dispose into the environmental, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.
Container Disposal	:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not, puncture, cut, or weld unclened drums. Send to drum recovery or metal reclaimer.
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14 TRANSPORT INFORMATION

Land (as per ADR classification) **Regulated**

Class	:	3
Packing Group	:	III
Hazard Identification no.	:	30
UN No.	:	1307
Danger label (primary risk)	:	3
Proper shipping name	:	Xylenes
Environmental Hazardous	:	No

IMDG

Identification number	:	UN 1307
Proper shipping name	:	XYLENES
Class/ Division	:	3
Packing group	:	III
Marine pollutant	:	No

IATA (Country variation may apply)

UN No.	:	1307
Proper shipping name	:	Xylenes
Class/ Division	:	3
Packing group	:	III

15 REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to material.

Chemical Inventory Status

AICS	: Listed.	
DSL	: Listed.	
INV (CN)	: Listed.	
ENCS (JP)	: Listed.	(3)-3
TSCA	: Listed.	
EINECS	: Listed.	215-535-7
KECI (KR)	: Listed.	97-1-275
KECI (KR)	: Listed.	KE-35427
PICCS (PH)	: Listed.	

16 Other information

MSDS Effective date : **1-Jan-19**

Uses and Restrictions : Raw material for use in the chemical industry.
Use only in industrial processes.

MSDS Distribution : The information in this document should be made available to all who may handle the product.

Disclaimer : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

End