G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: XYLENES

PRODUCT NUMBER(S): 297500, 297510, 297530

TRADE NAMES/SYNONYMS: Dimethyl benzene; Xylol

CAS-No: 1330-20-7 CHEMICAL FAMILY: Hydrocarbon, aromatic

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST
RECOMMENDED USE: Industrial: Use in coatings and printing inks, Polymer processing, Use in cleaning agents, Use in mining chemicals, Use in oil field drilling, Use as a fuel, Use in rubber production, Use in lubricants, Functional Fluids, Distribution of a substance, Manufacture of substances. Laboratory chemicals.
USES ADVISED AGAINST: No information available

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: G.J. CHEMICAL CO., INC.
Address: 40 VERONICA AVENUE
SOMERSET, NJ 08873
Telephone: 1-973-589-1450
Fax: 1-973-589-3072

1.4 Emergency Telephone Number
Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)
Flammable liquids (Category 3), H226
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organ toxicity – Single exposure (Category 3), Respiratory System, H335
Specific target organ toxicity – Repeated exposure, Inhalation (Category 2), Central Nervous System, Liver, Kidney, H373
Aspiration Hazard (Category 1), H304

Acute aquatic toxicity (Category 2), H401

2.2 GHS Label elements, including precautionary statements

Pictogram

GHS02 GHS08 GHS07

Signal word: DANGER!

Hazard statement(s)
H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation
H373 May cause damage to organs (Central nervous system, Liver, Kidney) through prolonged or repeated exposure if inhaled.
H401 Toxic to aquatic life.

Precautionary statement(s)
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.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/ attention if you feel unwell.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up
Disposal
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. INGREDIENTS

3.1 SUBSTANCE:

COMPONENT	CAS NO.	% BY WT.	CLASSIFICATION
XYLENES EC-No.215-535-7 Index-No.601-022-00-9 Reg.-No. 01-2119488216-32-XXXX	1330-20-7	98.5%min.	Flammable liquids (Category 3), H226 Acute toxicity, Inhalation (Category 4), H332 Skin irritation (Category 2), H315 Eye irritation (Category 2A), H319 STOT-SE (Category 3), Respiratory System, H335 STOT-RE, Inhalation (Category 2), Central Nervous System, Liver, Kidney, H373 Aspiration Hazard (Category 1), H304 Acute aquatic toxicity (Category 2), H401
ETHYLBENZENE EC-No.202-849-4 Index-No.601-023-00-4 Reg.-No. 01-2119892111-44-XXXX	100-41-4	0 - 17%	Flammable Liquids (Category 2), H225 Acute Toxicity, Inhalation (Category 4), H332 Carcinogenicity (Category 2), H351 STOT-RE (Category 2), H373 Aspiration Hazard (Category 1), H304 Aquatic Acute toxicity (Category 2), H401
WATER: EC-NO.231-791-2	7732-18-5	0.05% max	
SULFUR COMPOUNDS (as S)		0.003% max	
RESIDUE		0.002% max	

COMPONENT: Total aromatic content: Mixture of ortho-, meta-, and para-dimethylbenzene, ethyl

benzene.

3.2 MIXTURE: Not applicable.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: XYLENE: IRRITANT/NARCOTIC.
***FIRST AID*- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.**

SKIN CONTACT: XYLENE: IRRITANT
***FIRST AID*- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

EYE CONTACT: XYLENE: IRRITANT.
***FIRST AID*- Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Get medical attention immediately.**

INGESTION: XYLENE: NARCOTIC.
***FIRST AID*- Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.**
Treat symptomatically and supportively. Gastric lavage should be performed by qualified medical personnel. Get medical attention immediately.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:
Inhalation: Irritation of the upper respiratory tract may occur at 200 PPM. Exposure to high concentrations may result in nausea, vomiting, headache, ringing of the ears, and severe breathing difficulties. High vapor concentrations are anesthetic and central nervous system depressants. Liver and kidney damage may occur, but are usually mild and transient. High concentrations may cause death from sudden ventricular fibrillation, but more frequently death occurs from respiratory arrest.
Skin: Contact results in loss of natural oils and often results in dermatitis. Liquid

xylene is a de-fatting agent and may cause a burning sensation, drying, and possibly blistering. The liquid is readily absorbed through intact or broken skin.
Eye: Splashes are toxic to eyes. Vapor exposure has also caused tearing and photophobia. An accidental splash in the human eye caused transient superficial damage with rapid recovery, although reversible corneal burns have also been reported. Hemorrhagic inflammatory lesions may develop.
Ingestion: Causes burning sensation in mouth and stomach, nausea, vomiting and salivation, severe gastrointestinal distress with nausea and vomiting, possibly, and toxic effects including signs of central nervous system depression and other symptoms as in acute inhalation, including ventricular fibrillation and liver and kidney injury. Minute amounts aspirated into the lungs can produce severe pulmonary injury or death.
Chronic Effects:
Inhalation: Sweetish taste in the mouth, dry nose and throat, strong thirst, mucosal hemorrhage, and anemia have been reported. Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Repeated or prolonged inhalation of vapors above 200 PPM may cause nausea, vomiting, abdominal pain, and anorexia. Other common complaints include headache, fatigue, lassitude, irritability, breathing difficulties, and flatulence. Effects on the nervous system may result in excitation, followed by depression, paresthesia, tremors, apprehension, impaired memory, insomnia, vertigo, and tinnitus.
Skin: Repeated or prolonged skin contact may cause a skin rash. Repeated or prolonged contact may cause de-fatting of the skin with drying, erythema, cracking, thickening and blistering.
Eye: Repeated exposure of the eyes to high concentrations of vapor may cause reversible eye damage.
Repeated or prolonged exposure to high vapor concentrations may cause a burning sensation, conjunctivitis and blurred vision; reversible vacuolar, epithelial keratopathy has been reported in some workers.
Ingestion: Chronic effects of ingestion on humans not readily available.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:
Specific details on antidote: No recommendation given.

5. FIRE FIGHTING PROCEDURES

FLASH POINT: 25°C (77°F) (CC) **UPPER EXPLOSIVE LIMIT: 7.0% (V)**
AUTOIGNITION TEMP.: 464°C (867°F) **LOWER EXPLOSIVE LIMIT: 1.1% (V)**
UNIFORM FIRE CODE: Flammable Liquid Class 1C

5.1 SUITABLE EXTINGUISHING MEDIA:
DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM

FOR LARGER FIRES, USE WATER SPRAY, FOG OR REGULAR FOAM

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. DUE TO LOW ELECTROCONDUCTIVITY OF THE SUBSTANCE, FLOW OR AGITATION MAY GENERATE ELECTROSTATIC CHARGES RESULTING IN SPARKS WITH POSSIBLE IGNITION. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. VAPOR-AIR MIXTURES ARE EXPLOSIVE.
Flow, agitation etc., can cause build-up of electrostatic charge due to liquid's low conductivity. Reacts violently with strong oxidants.

CONDITIONS OF FLAMMABILITY: Flammable in the presence of a source of ignition when the temperature is above the flash point.

HAZARDOUS COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS: Shut off source. Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind. Do not spray pool fires directly. A solid stream of water or foam directed into hot burning liquid can cause frothing. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Water fog may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat. Cool containers with water-fog from as far a distance as possible. Wear NIOSH/MSHA approved self-contained breathing apparatus (SCBA) for confined spaces. Use full fire-fighting protective clothing. If protective equipment is not available or not used, fight fire from a protected location or safe distance. Avoid breathing toxic vapors, keep upwind.

⑥. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Extremely Flammable; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory

equipment and fire resistant protective clothing during cleanup operations.

6.2 ENVIRONMENTAL PRECAUTIONS:
Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:
Methods for cleanup and containment:
Use explosion proof equipment. Shut off valves, contain spill, for small spills add non-flammable absorbent in spill area. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.
Methods for disposal:
Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations

SOIL SPILL:
Dig a holding area such as a pit, pond or lagoon to contain spill and dike surface flow using barrier of soil, sandbags, foamed polyurethane or foamed concrete. Absorb liquid mass with fly ash or cement powder.
Immobilize spill with universal gelling agent. Reduce vapor and fire hazard with appropriate foam.
AIR SPILL:
Knock down vapors with water spray. Keep upwind.
WATER SPILL: Limit spill motion and dispersion with natural barriers or oil spill control booms. Apply detergents, soaps, alcohols or another surface-active agent. Apply universal gelling agent to immobilize trapped spill and increase efficiency of removal. If dissolved, at a concentration of 10 PPM or greater, apply activated carbon at ten times the amount that has been spilled. Use suction hoses to remove trapped spill material. Use mechanical dredges or lifts to extract immobilized masses of pollution and precipitates.
OCCUPATIONAL SPILL: Shut off ignition sources. Stop leak if you can do it without risk. Use water spray to reduce vapors. For small spills, take up with sand or other absorbent material and place into containers for later disposal. For larger spills, dike far ahead of spill for later disposal. No smoking, flames or flares in hazard area. Keep unnecessary people away; isolate hazard area and restrict entry.

REPORTABLE QUANTITY (RQ): 1000 POUNDS
The Superfund Amendments and Reauthorization Act (SARA) Section 304 requires that a release equal to or greater than the reportable quantity for this substance be immediately reported to the local Emergency Planning Committee and the State Emergency Response Commission (40 CFR 355.40). If the release of this substance is reportable under CERCLA Section 103, the National Response Center must be notified immediately at (800) 424-8802 or (202) 426-2675 in the metropolitan

Washington, D.C. area (40 CFR 302.6).
6.4 REFERENCE TO OTHER SECTIONS: See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes), which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not breathe vapor. Avoid work practices that may release volatile components into the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers. Keep away from heat, sparks and flame. Do not breathe vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed and upright to prevent leakage. Use only with adequate ventilation. Wash thoroughly after handling. Containers of this material may be hazardous when empty. Since emptied containers retain product residues, assume emptied containers to have the same hazard qualities as full containers.

Advice on general occupational hygiene:
Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

STATIC HAZARD: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 "Flammable and Combustible Liquids" and National Fire Protection Association (NFPA 77) "Recommended Practice on Static Electricity".

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25°C. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Do not take internally. Store away from incompatible substances.

CONTAINER WARNINGS: Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers

release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

8.1 CONTROL PARAMETERS:

COMPONENT	CAS NO.	% BY WT.	EXPOSURE LIMITS
XYLENES	1330-20-7	98.5% min	100PPM TWA (ACGIH)
	EC-No.215-535-7		150PPM STEL (ACGIH)
	Index-No.601-022-00-9		100PPM TWA (NIOSH)
	Reg.-No. 01-2119488216-32-XXXX		150PPM STEL (NIOSH)
			100PPM TWA (OSHA)
ETHYL BENZENE	100-41-4	0 - 17%	100PPM TWA (ACGIH)
	EC-No.202-849-4		125PPM STEL (ACGIH)
	Index-No.601-023-00-4		100PPM TWA (NIOSH)
	Reg.-No. 01-2119892111-44-XXXX		125PPM STEL (NIOSH)
			100PPM TWA (OSHA)
			125PPM STEL (OSHA)

Key: (PEL) = Permissible Exposure Limit OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH
(STEL) = Short Term Exposure Limit ACGIH
(WEEL) = USA. Workplace Environmental Exposure Levels
(TWA) = Time Weighted Average
CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health
N.E. =None Established

8.2 EXPOSURE CONTROLS

EXPOSURE GUIDELINES: Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS: Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits.

All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION:
The following respirators and maximum use concentrations are recommendations by the U.S. Department of Health and Human Services, NIOSH Pocket Guide to Chemical Hazards; NIOSH criteria documents or by the U.S. Department of Labor, 29 CFR 1910 subpart z.
The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).
XYLENE (O-, M-, AND P-ISOMERS):
1 to 10 times TWA-MSHA-NIOSH approved chemical cartridge respirator with organic vapor cartridge(s).
Any powered air-purifying respirator with organic vapor cartridge(s).
10 TIMES TWA+ PPM- Any approved supplied-air respirator.
Any approved self-contained breathing apparatus.
ESCAPE- Any air-purifying full face-piece respirator (gas mask) with a chin-style or front- or back-mounted organic vapor canister.
Any appropriate escape-type self-contained breathing apparatus.

BODY CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance. Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

SKIN PROTECTION: Employee must wear appropriate protective gloves to prevent contact with this substance.
Full contact Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Splash contact Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 35 min

HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

EYE/FACE PROTECTION: Use safety eyewear with splash-guards or face shield. Contact lenses should not be worn.
Emergency shower and eyewash should be easily accessible to the work area.

⑨. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Xylenes 1330-20-7

APPEARANCE:	**Watery liquid.**
COLOR:	**Colorless**
ODOR:	**Aromatic, benzene like, odor**
ODOR THRESHOLD:	**0.3 PPM**
pH:	**No data available**
MOLECULAR WEIGHT:	**106.16**
MELTING POINT:	**-54-55°F (-13°C)**
BOILING POINT:	**280-291°F (138-144°C)**
SPECIFIC GRAVITY:	**0.8611-0.8802**
RELATIVE DENSITY:	**0.86 g/mL at 25 °C (77 °F)**
VAPOR PRESSURE:	**7-9 mm Hg @ 20°C**
VAPOR DENSITY:	**3.7**
WATER SOLUBILITY:	**0.00003%**
PARTITION COEFFICIENT N-OCTANOL/WATER:	**No data available**
FLASH POINT:	**25°C (77°F) (CC)**
EVAPORATION RATE: (butyl acetate =1):	**0.6**
UPPER FLAMMIBILITY LIMIT:	**7%**
LOWER FLAMMABILITY LIMIT:	**1.1%**
AUTOIGNITION TEMPERATURE:	**464°C (867°F)**
DECOMPOSITION TEMPERATURE:	**No data available**
VISCOSITY:	**No data available**
EXPLOSIVE PROPERTIES:	**No data available**
OXIDIZING PROPERTIES:	**No data available**

SOLVENT SOLUBILITY: Soluble in alcohol, ether, acetone, petroleum ether, benzene, carbon tetrachloride, organic solvents.

9.2 OTHER INFORMATION: None

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY: No data available.

10.2 CHEMICAL STABILITY: Unstable ( ) Stable (X)
Stable under normal temperatures and pressures.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: Vapors may form explosive mixtures with air.

HAZARDOUS POLYMERIZATION: May occur ( ) Will not occur (X)
Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

10.4 CONDITIONS TO AVOID: --> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. Extremes of temperature and direct sunlight.

10.5 INCOMPATIBILE MATERIALS:
NITRIC ACID: Exothermic reaction
OXIDIZERS (STRONG): Fire and explosion hazard.
PLASTICS, RUBBER, COATINGS: May be attacked.
SULFURIC ACID: Exothermic reaction.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products may include toxic oxides of carbon.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Inhalation: Irritation of the upper respiratory tract may occur at 200 PPM. Exposure to high concentrations may result in nausea, vomiting, headache, ringing of the ears, and severe breathing difficulties. High vapor concentrations are anesthetic and central nervous system depressants. Liver and kidney damage may occur, but are usually mild and transient. High concentrations may cause death from sudden ventricular fibrillation, but more frequently death occurs from respiratory arrest.

Skin: Contact results in loss of natural oils and often results in dermatitis. Liquid xylene is a de-fatting agent and may cause a burning sensation, drying, and possibly blistering. The liquid is readily absorbed through intact or broken skin.

Eye: Splashes are toxic to eyes. Vapor exposure has also caused tearing and photophobia. An accidental splash in the human eye caused transient superficial damage with rapid recovery, although reversible corneal burns have also been reported. Hemorrhagic inflammatory lesions may develop.

Ingestion: Causes burning sensation in mouth and stomach, nausea, vomiting and salivation, severe gastrointestinal distress with nausea and vomiting, possibly, and toxic effects including signs of central nervous system depression and other symptoms as in acute inhalation, including ventricular fibrillation and liver and kidney injury. Minute amounts aspirated into the lungs can produce severe pulmonary injury or death.

Chronic Effects:

Inhalation: Sweetish taste in the mouth, dry nose and throat, strong thirst, mucosal hemorrhage, and anemia have been reported. Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Repeated or prolonged inhalation of vapors above 200 PPM may cause nausea, vomiting, abdominal pain, and anorexia. Other common complaints include headache, fatigue, lassitude, irritability, breathing difficulties, and flatulence. Effects on the nervous system may result in excitation, followed by depression, paresthesia, tremors, apprehension, impaired memory, insomnia, vertigo, and tinnitus.

Skin: Repeated or prolonged skin contact may cause a skin rash. Repeated or prolonged contact may cause de-fatting of the skin with drying, erythema, cracking, thickening and blistering.

Eye: Repeated exposure of the eyes to high concentrations of vapor may cause reversible eye damage.
Repeated or prolonged exposure to high vapor concentrations may cause a burning sensation, conjunctivitis and blurred vision; reversible vacuolar, epithelial keratopathy has been reported in some workers.

Ingestion: Chronic effects of ingestion on humans not readily available.

<u>ACUTE TOXICITY</u>:

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient	Oral LD50(Rat)	Skin LD50(Rabbit)	Inhalation LC50
Xylenes	3523mg/kg	12126mg/kg	5000ppm/ 4hr
Ethylbenzene	3500mg/kg	15433mg/kg	

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Skin irritation - 24 h

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Moderate eye irritation

RESPIRATORY OR SKIN SENSITIZATION: No data available

MUTAGENIC EFFECTS: No information available.

CARCINOGEN STATUS:
Xylene:
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ethylbenzene:
IARC: 2B - Group 2B: Possibly carcinogenic to humans

REPRODUCTIVE TOXICITY: No data available.

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System) May cause respiratory irritation.

Specific target organ toxicity (STOT-RE)- repeated exposure (Globally Harmonized System) Inhalation - May cause damage to organs through prolonged or repeated exposure. - Central nervous system, Liver, Kidney

ASPIRATION HAZARD: May be fatal if swallowed and enters airways.

AT INCREASED RISK FROM EXPOSURE: Pregnant women.
11.2 ADDITIONAL DATA: Blurred vision, Incoordination., Headache, Nausea, Vomiting, Dizziness, Weakness, anemia, Prolonged or repeated exposure to skin causes defatting and dermatitis.
Alcohol may enhance the toxic effects. Stimulants such as epinephrine or ephedrine may induce ventricular fibrillation.
RTECS#: ZE2100000

12. ECOLOGICAL INFORMATION

ECOLOGY: Water

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS
May be dangerous if it enters water intakes.
Notify local health and wildlife officials.
Notify operators of nearby water intakes.

XYLENES:
12.1 AQUATIC TOXICITY (Acute):

Toxicity to fish:
LD50 - Oncorhynchus mykiss (rainbow trout) - 3.3 mg/l - 96 h

Toxicity to daphnia and other invertebrates:
EC50 - Daphnia magna (Water flea) - 75.49 mg/l - 24 h

Toxicity to algae:
EC50 - Pseudokirchneriella subcapitata - 72 mg/l - 14 d Growth inhibition

12.2 PERSISTANCE AND DEGRADABILITY: Readily Biodegradable

12.3 BIOACCUMULATIVE POTENTIAL: No data available.

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB:
PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

ETHYLBENZENE:
12.1 AQUATIC TOXICITY (Acute):
Toxicity to Fish:
LC50 - Oncorhynchus mykiss (rainbow trout) - 4.2 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) – 1.8 – 2.4 mg/l - 48 h

Toxicity to algae:
EC50 - static test - Skeletonema costatum (marine diatom) - 4.9 mg/l - 72 h

12.2 PERSISTANCE AND DEGRADABILITY:
aerobic - Exposure time 28 d Result: 70 - 80 % - Readily biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL:
Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected. Log Pow: 3.6 @20°C (68°F)

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB:
PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: An environmental hazard cannot be excluded in

the event of unprofessional handling or disposal. Toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE DISPOSAL METHODS: The waste material should be treated and/or disposed of at site authorized to handle hazardous chemical waste. Appropriate Federal, State and Local Regulatory Authorities should be contacted before discharge, treatment or disposal of waste material.
The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

CONTAMINATED PACKAGING: Dispose of as unused product.

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: U239
If the waste is a spent solvent, the appropriate spent solvent code should be used.
DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262

14. TRANSPORT INFORMATION

Land Transport (DOT)
14.1 USDOT ID Number----------> UN1307
14.2 USDOT Shipping Name----------> Xylenes
14.3 USDOT Hazard Classification-------> 3 (Flammable Liquid)
USDOT Label Codes----------> 3
14.4 USDOT Package Code----------> III
14.5 Marine Pollutant----------> No
14.6 Special precautions for user--------> None
Emergency Response Guide--------> 130
Reportable quantity----------> 1000lbs.
Poison inhalation hazard----------> No

Sea Transport (IMDG)
14.1 ID Number----------> UN1307
14.2 Proper shipping name----------> XYLENES
14.3 Hazard Classification----------> 3 (Flammable Liquid))
Label Codes----------> 3
14.4 Package Code----------> III
14.5 Marine Pollutant----------> No
14.6 Special precautions for user----------> Yes
EMS-Number----------> F-E, S-D

Air Transport (IATA)

14.1 ID Number----------> UN1307
14.2 Proper shipping name----------> Xylenes
14.3 Hazard Classification----------> 3 (Flammable Liquid)
Label Codes----------> 3 (Flammable Liquid)
14.4 Package Code----------> III
14.5 Environmental hazard----------> None
14.6 Special precautions for user----------> None

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

SARA TITLE III (Superfund Amendment and Reauthorization Act)
SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed
SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Listed as a toxic chemical Ethylbenzene CAS-No.100-41-4; Xylene 1330-20-7

SECTION 311/312: Hazard Categorization (40 CFR 370)- Acute Health Hazard, Chronic Health Hazard, and Fire Hazard.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed
Reportable Quantity - 1000 pounds.
SECTION 101(14) Reportable Quantity: 1000 lbs.

RCRA (Resource Conservation and Recovery Act.)
40 CFR 261.33 Hazardous Waste Number: U239

Massachusetts Right to Know Components
Ethylbenzene CAS-No.100-41-4;
Xylene 1330-20-7
Pennsylvania Right to Know Components
Ethylbenzene CAS-No.100-41-4
Xylene 1330-20-7
New Jersey Right to Know Components
Ethylbenzene CAS-No.100-41-4
Xylene 1330-20-7

California Prop. 65 Components
WARNING! This product contains a chemical known to the State of California to cause cancer. Ethylbenzene CAS-No.100-41-4

TSCA (Toxic Substance Control Act)
Xylene 1330-20-7 and Ethylbenzene CAS-No.100-41-4 are listed on the TSCA Inventory.
International Inventories:

Country or Region	Inventory Name	On inventory yes/no
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemicals Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Japan	Industrial Safety & Health Law Inventory (ISHL)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Mexico	National Inventory of Chemical Substances (INSQ)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Switzerland	Inventory of Notified New Substances (CHINV)	Yes
Taiwan	National Existing Chemical Inventory (NECI)	Yes
United States & Puerto Rico	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.

16. OTHER INFORMATION:

Hazard Rating:
4-Extreme
3-High
2-Moderate
1-Slight
0-Insignificant

NFPA RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=0
HMIS Ratings (Scale 0-4): Health=2 Fire=3 Reactivity=0 PPE=G

Hazard statement(s) from Section 2 and 3:
H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

H332 Harmful if inhaled.
H335 May cause respiratory irritation
H373 May cause damage to organs (Central nervous system, Liver, Kidney) through prolonged or repeated exposure if inhaled.
H401 Toxic to aquatic life.

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Revision Content----------> General update all sections.
Revision Date---------------> June 5, 2018
Prepared by-----------------> T.G. Fenstermaker Jr.

Acronyms:

ACGIH	**-**	**American Conference of Governmental Industrial Hygenists**
AIHA	**-**	**American Industrial Hygiene Association**
ANSI	**-**	**American Nation Standards Institute**
API	**-**	**American Petroleum Institute**
CERCLA	**-**	**Comprehensive Emergency Response, Compensation, and Liability Act**
DOT	**-**	**U.S. Department of Transportation**
EPA	**-**	**U.S. Environmental Protection Agency**
HMIS	**-**	**Hazardous Materials Information System**
IARC	**-**	**International Agency For Research On Cancer**
MSHA	**-**	**Mine Safety and Health Administration**
NFPA	**-**	**National Fire Protection Association**
NIOSH	**-**	**National Institute of Occupational Safety and Health**
NOIC	**-**	**Notice of Intended Change (Proposed change to ACGIH TLV)**
NTP	**-**	**National Toxicology Program**
OPA	**-**	**Oil Pollution Act of 1990**
OSHA	**-**	**U.S. Occupational Safety & Health Administration**
PEL	**-**	**Permissible Exposure Limit (OSHA)**
RCRA	**-**	**Resource Conservation and Recovery Act**
REL	**-**	**Recommended Exposure Limit (NIOSH)**
SARA	**-**	**Superfund Amendments and Reauthorization Act of 1986 Title III**
SCBA	**-**	**Self-Contained Breathing Apparatus**
STEL	**-**	**Short-Term Exposure Limit (generally 15 minutes)**
TLV	**-**	**Threshold Limit Value**
TSCA	**-**	**Toxic Substances Control Act**
TWA	**-**	**Time Weighted Average (8hr.)**
WHMIS	**-**	**Canadian Workplace Hazardous Materials Information System**