

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

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: Ortho-XYLENE

PRODUCT NUMBER(S): 215500, 215530

TRADE NAMES/SYNONYMS: Dimethyl benzene; ortho-Xylene

CAS-No. 95-47-6

CHEMICAL FAMILY: Hydrocarbon, aromatic

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RECOMMENDED USE: Industrial: Distribution, Intermediate, Use in Fuel, Coatings, Cleaning agents, rubber production, Lubricants, Oil field drilling and production, Mining chemicals, Release agent, 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

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Aspiration hazard (Category 1), H304

Acute aquatic toxicity (Category 3), H402

Chronic aquatic toxicity (Category 3), H412

2.2 GHS Label elements, including precautionary statements



Signal word: **WARNING**

Hazard statement(s)

H226 Flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H312 + H332 Harmful in contact with skin or if inhaled

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H402 Harmful to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

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.
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
ORTHO-XYLENE EC-No.202-422-2 Index-No.601-022-00-9 Reg.-No. 01-2119485822-30-XXXX	95-47-6	98.0% min.	Flammable liquids (Category 3), H226 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Skin irritation (Category 2), H315 Eye irritation (Category 2A), H319 STOT-SE (Category 3), Respiratory System, H335 Aspiration (Category 1), H304 Acute aquatic toxicity (Category 2), H402 Chronic aquatic toxicity (Category 2), H412
PARA-XYLENE EC-No.203-396-5 Index-No. 601-022-00-9 Reg.-No. 01-2119484661-33-XXXX	106-42-3	0.7% max.	Flammable liquids (Category 3), H226 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Skin irritation (Category 2), H315 Acute aquatic toxicity (Category 2), H401
NON AROMATICS C9 AROMATICS WATER:	7732-18-5 EC-NO.231-791-2	0.3% max. 0.8% max. 0.05% max	

3.2 MIXTURE: Not applicable.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: ORTHO-XYLENE: IRRITANT/NARCOTIC.

ACUTE EXPOSURE- Irritation of the upper respiratory tract may occur at 200 PPM. Exposure to higher

****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: ORTHO-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: ORTHO-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: ORTHO-XYLENE: NARCOTIC.

****FIRST AID- **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: 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. High concentrations may cause death from sudden ventricular fibrillation, but more frequently death occurs from respiratory arrest.

Skin: Contact may result in loss of natural oils and often results in dermatitis. Liquid ortho-Xylene is a defatting agent and may cause a burning sensation, drying, vasodilation, erythema, and possibly blistering.

Eye: Splashes are toxic to eyes. Hemorrhagic inflammatory lesions may develop.

An accidental splash in the human eye caused transient superficial damage with rapid recovery, although reversible corneal burns have also been reported.

Ingestion: May cause burning sensation in mouth and stomach, nausea, vomiting and salivation. Minute amounts aspirated into the lungs can produce severe hemorrhagic pneumonitis and severe pulmonary injury or death. Toxic effects including signs of central nervous system depression and other symptoms as in acute inhalation, including ventricular fibrillation and liver and kidney injury.

Chronic Effects:

Inhalation: Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Repeated or prolonged skin contact may cause a skin rash. 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.

Eye: Repeated exposure of the eyes to high concentrations of vapor may cause reversible eye damage. High vapor concentrations may cause a burning sensation, conjunctivitis and blurred vision;

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

Skin: Repeated or prolonged contact may cause defatting of the skin with drying, erythema, cracking, thickening and blistering.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Specific details on antidote: No recommendation given.

5. FIRE FIGHTING MEASURES

FLASH POINT: 31°C (87.8°F) (CC)

LOWER EXPLOSIVE LIMIT: 0.9% (V)

AUTOIGNITION TEMP.: 464°C (867°F)

UPPER EXPLOSIVE LIMIT: 6.7% (V)

UNIFORM FIRE CODE: Flammable Liquid Class 1C

SUITABLE EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM (1996 Emergency Response Guidebook, 130. FOR LARGER FIRES, USE WATER SPRAY, FOG OR REGULAR FOAM (1996 Emergency Response Guidebook 130).

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. Vapors mix readily with air, may explode if ignited in an enclosed area, flashback along vapor trail may occur. 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. Water may be ineffective (NFPA 325M, Fire Hazard Properties of Flammable Liquids, Gases, and Volatile Solids, 1991)

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Flammable Liquid; 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:

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.

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.

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. 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. Do not take internally. Avoid work practices that may release volatile components in 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. Keep container tightly closed and upright to prevent leakage. Wash thoroughly after handling.

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. Store away from incompatible substances. Outside or detached storage is preferable. Inside storage should be in standard flammable liquids storage room or cabinet. Separate from oxidizing materials (NFPA 49, Hazardous Chemicals Data, 1975). 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. 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.

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
ORTHO-XYLENE	95-47-6 EC-NO.202-422-2 Index-No.601-022-00-9 Reg.-No. 01-2119485822-30-XXXX	98.0% min	100PPM TWA (ACGIH) 150PPM STEL (ACGIH) 100PPM TWA (NIOSH) 150PPM STEL (NIOSH) 100PPM TWA (OSHA) 150PPM STEL (OSHA)
PARA-XYLENE	106-42-3 EC-No.203-396-5 Index-No. 601-022-00-9 Reg.-No. 01-2119484661-33-XXXX	0.7% max.	100ppm TWA (ACGIH) 150ppm STEL (ACGIH) 100ppm TWA (NIOSH) 150ppm STEL (NIOSH)

NON AROMATICS	0.3% max.
C9 AROMATICS	0.8% max.
WATER:	7732-18-5 0.05% max

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):

1000 PPM- Any chemical cartridge respirator with organic vapor cartridge(s).
Any powered air-purifying respirator with organic vapor cartridge(s).
Any supplied-air respirator.
Any 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: 30 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:

o-Xylene 95-47-6

APPEARANCE:	Watery liquid
COLOR:	Colorless
ODOR:	Sweet aromatic, benzene type odor.
ODOR THRESHOLD:	0.3 PPM
pH:	No data available
MOLECULAR WEIGHT:	106.17
MELTING POINT:	-26 - -23 °C (-15 - -9 °F)
BOILING POINT:	143 - 145°C (289 – 293°F)
SPECIFIC GRAVITY:	0.88
RELATIVE DENSITY:	0.879 g/mL at 20°C (68°F)
VAPOR PRESSURE:	9 mm Hg @ 20°C (68°F)
VAPOR DENSITY:	3.7
WATER SOLUBILITY:	0.1705g/L 25°C (77°F)
PARTITION COEFFICIENT N-OCTANOL/WATER: log Pow	3.12
FLASH POINT:	31.0°C (87.8°F)
EVAPORATION RATE: (butyl acetate =1):	0.6
UPPER FLAMMABILITY LIMIT:	6.7%
LOWER FLAMMABILITY LIMIT:	0.9
AUTOIGNITION TEMPERATURE:	464.0°C (867.2°F)
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	No data available
EXPLOSIVE PROPERTIES:	No data available
OXIDIZING PROPERTIES:	No data available

9.2 OTHER INFORMATION:

SURFACE TENSION:

29.8 mN/m at 25.0 °C (77.0 °F)

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

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 INCOMPATIBLE 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 Eye--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Inhalation: 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. High concentrations may cause death from sudden ventricular fibrillation, but more frequently death occurs from respiratory arrest.

Skin: Contact may result in loss of natural oils and often results in dermatitis. Liquid ortho-Xylene is a defatting agent and may cause a burning sensation, drying, vasodilation, erythema, and possibly blistering.

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

Ingestion: May cause burning sensation in mouth and stomach, nausea, vomiting and salivation. Minute amounts aspirated into the lungs can produce severe hemorrhagic pneumonitis and severe pulmonary injury or death. Toxic effects including signs of central nervous system depression and other symptoms as in acute inhalation, including ventricular fibrillation and liver and kidney injury.

Chronic Effects:

Inhalation: Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Repeated or prolonged skin contact may cause a skin rash. 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.

Eye: Repeated exposure of the eyes to high concentrations of vapor may cause reversible eye damage. High vapor concentrations may cause a burning sensation, conjunctivitis and blurred vision;

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

Skin: Repeated or prolonged contact may cause defatting of the skin with drying, erythema, cracking, thickening and blistering.

ACUTE TOXICITY:

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

Ingredient	Oral LD50 (Rat)	Skin LD50(Rabbit)	Inhalation LC50	
Ortho-Xylene	2107mg/kg	866.8mg/kg		

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Irritating to skin. - 24 h

SERIOUS EYE DAMAGE/EYE IRRITATION: No data available

RESPIRATORY OR SKIN SENSITIZATION: Mouse Result: Does not cause skin sensitization. (OECD Test Guideline 429)

MUTAGENIC EFFECTS: Ames test Salmonella typhimurium Result: negative

CARCINOGEN STATUS: IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (o-Xylene).

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.

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 on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

REPRODUCTIVE TOXICITY: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected human reproductive toxicant

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System): no data available

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): no data available

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

11.2 ADDITIONAL INFORMATION: Alcohol may enhance the toxic effects. Stimulants such as epinephrine or ephedrine may induce ventricular fibrillation. At increased risk from exposure: Pregnant women.

Narcosis, Lung irritation, chest pain, pulmonary edema, Central nervous system depression, Dermatitis, Gastrointestinal disturbance, Liver injury may occur., Kidney injury may occur., Blood disorders

RTECS#: ZE2450000

12. ECOLOGICAL INFORMATION

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS

May be dangerous if it enters water intakes.

Notify local health and pollution control officials.

Notify operators of nearby water intakes.

FOULING TO SHORELINE

12.1 AQUATIC TOXICITY:

Toxicity to fish:

LC50 - Lepomis macrochirus (Bluegill) - 16.10 mg/l - 96 h

LC50 - Carassius auratus (goldfish) - 13.00 mg/l - 24 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 1.39 - 1.87 mg/l - 48 h

Toxicity to algae:

EC50 - Pseudokirchneriella subcapitata (green algae) - 4.70 mg/l - 72 h

EC50 - Chlorella vulgaris (Fresh water algae) - 55.00 mg/l - 24

12.2 PERSISTENCE AND DEGRADABILITY: aerobic - Exposure time 28 d Result: 69.67 % - Not readily biodegradable. (OECD Test Guideline 301F)

Biological Oxygen Demand (BOD): 0 lb/lb 5 days, 2.5% (theor.) 8 days

12.3 BIOACCUMULATIVE POTENTIAL:

Log octanol/water partition coefficient of 3.12

Bio-concentration Factor (BCF): 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: Harmful to aquatic life with long lasting effects.

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.

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.

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 (Ortho)
- 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-----> Yes
Emergency Response Guide-----> 130
Reportable quantity-----> 1000lbs.

Sea Transport (IMDG)

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

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
o-Xylene CAS-No.95-47-6**

SECTION 311: 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

o-Xylene CAS-No.95-47-6; Reportable Quantity - 1,000 pounds.

SECTION 101(14) Reportable Quantity: 1,000 lbs

RCRA (Resource Conservation and Recovery Act.)

40 CFR 261.33 Hazardous Waste Number: U239

Massachusetts Right to Know Components

o-Xylene CAS-No.95-47-6

Pennsylvania Right to Know Components

o-Xylene CAS-No.95-47-6

New Jersey Right to Know Components

o-Xylene CAS-No.95-47-6

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA (Toxic Substance Control Act)

o-Xylene CAS-No.95-47-6 is listed on the TSCA Inventory.

International Inventories:

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

<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has not been carried out for this substance.

16. OTHER INFORMATION:

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.

H312 + H332 Harmful in contact with skin or if inhaled

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H402 Harmful to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Date of Preparation-----> July 06, 2005

Revision Number-----> 2.5

Revision Content-----> General update all sections

Revision Date-----> October 23, 2018

Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygienists
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**

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