SAFETY DATA SHEET

1. Identification

Product identifier **Xylene**

Other means of identification

Product code -

Recommended use Industrial use.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Supplier/Manufacturer KMG Electronic Chemicals, Inc.

Address 9555 W. Sam Houston Parkway South
Suite 600
Houston, Texas 77099

Telephone 713-600-3800

Emergency telephone 760-476-3960

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, dermal	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Reproductive toxicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1 (liver, kidney)
	Aspiration hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Flammable liquid and vapor. Harmful in contact with skin. Harmful if inhaled. Causes skin irritation. Causes eye irritation. May damage fertility or the unborn child. Causes damage to organs (liver, kidney) through prolonged or repeated exposure. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If on skin: Wash with plenty of water. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed: Call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Take off immediately all contaminated clothing and wash it before reuse. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Call a poison center/doctor if you feel unwell.

Storage Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)	Not classified.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Xylene (mixture of isomers)		1330-20-7	100

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move injured person into fresh air and keep person calm under observation. Get medical attention immediately.

Skin contact Flush thoroughly with water for at least 15 minutes. Remove contaminated clothing and wash skin with soap and water. Get medical attention immediately.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Only induce vomiting at the instruction of medical personnel. Get medical attention immediately.

Most important symptoms/effects, acute and delayed Causes eye irritation. Causes skin irritation. Vapors may cause drowsiness and dizziness.

Indication of immediate medical attention and special treatment needed In case of shortness of breath, give oxygen. Keep victim warm.

General information Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

5. Fire-fighting measures

Suitable extinguishing media The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures. Extinguish with carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Water may be ineffective.

Specific hazards arising from the chemical Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized. Solvent vapors may form explosive mixtures with air.

Special protective equipment and precautions for firefighters Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. Move containers from fire area if you can do so without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Water runoff can cause environmental damage. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

Specific methods Move containers from fire area if you can do so without risk.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Ventilate closed spaces before entering. Use personal protection as recommended in Section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Prevent entry into waterways, sewers, basements or confined areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage with non-combustible, absorbent material.

Small Spills: Absorb spill with vermiculite or other inert material. Clean contaminated surface thoroughly. After removal flush contaminated area thoroughly with water.

Never return spills in original containers for re-use.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

7. Handling and storage

Precautions for safe handling

Pregnant women should not work with the product, if there is the least risk of exposure. Avoid inhalation of vapors and contact with skin and eyes. The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures. Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. Do not get this material in your eyes, on your skin, or on your clothing. Use only in area provided with appropriate exhaust ventilation. When using, do not eat, drink or smoke. Wash thoroughly after handling. Handle and open container with care.

Conditions for safe storage, including any incompatibilities

Follow rules for flammable liquids. Keep away from sources of ignition - No smoking. Store in a cool place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
Xylene (mixture of isomers) (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Material	Type	Value
Xylene (mixture of isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

Biological limit values

ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
Xylene (mixture of isomers) (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Do not get this material in contact with eyes. Wear approved safety glasses or goggles. Wear face shield if there is risk of splashes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin protection

Hand protection

Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other

Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Protective shoes or boots. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the Personal Protective Equipment manufacturer.

Respiratory protection

In case of inadequate ventilation use suitable respirator. Wear approved respiratory protection when working with this material unless ventilation or other engineering controls are adequate to keep airborne concentrations below recommended exposure standards. Follow respirator protection program requirements (OSHA 1910.134 or CSA-Z94.4-02(R2008), and ANSI / AIHA Z88.6) for all respirator use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations	When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Remove and isolate contaminated clothing and shoes. Handle in accordance with good industrial hygiene and safety practice. Launder contaminated clothing before reuse.

9. Physical and chemical properties

Appearance	Colorless liquid.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	Strong. Aromatic.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	278.6 - 291.2 °F (137 - 144 °C)
Flash point	77.0 °F (25.0 °C) Closed Cup
Evaporation rate	0.8
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0.9
Flammability limit - upper (%)	7
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.7 kPa (20°C)
Vapor density	Not available.
Relative density	0.86 - 0.88 (20°C)
Solubility(ies)	Insoluble in water.
Partition coefficient (n-octanol/water)	3.12 - 3.2
Auto-ignition temperature	865.4 - 982.4 °F (463 - 528 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Heat of combustion (NFPA 30B)	27.4 kJ/g
Molecular weight	106.16 g/mol
Percent volatile	100 %
VOC (Weight %)	100 %

10. Stability and reactivity

Reactivity	Stable at normal conditions.
Chemical stability	Stable under normal temperature conditions. Risk of ignition.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, sparks, flames, elevated temperatures.
Incompatible materials	Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
Inhalation	Harmful if inhaled. May cause drowsiness or dizziness.

Skin contact Causes skin irritation. Harmful in contact with skin.

Eye contact Causes eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure. Cough. Causes skin irritation. Vapors may cause nausea, headache and/or dizziness. Causes eye irritation.

Information on toxicological effects

Acute toxicity Harmful if inhaled. Harmful in contact with skin.

Product	Species	Test Results
Xylene (CAS 1330-20-7)		
Acute		
Dermal		
LD50	Rabbit	> 43 g/kg
Inhalation		
LC50	Mouse	3907 mg/l, 6 Hours
	Rat	6350 mg/l, 4 Hours
LCL0	Rat	8000 mg/l, 4 Hours
Oral		
LD50	Mouse	1590 mg/kg
	Rat	3523 - 8600 mg/kg
Other		
LD50	Rat	3.8 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory sensitization Not classified.

Skin sensitization Not a skin sensitizer.

Germ cell mutagenicity No data available.

Carcinogenicity No data available.

IARC Monographs. Overall Evaluation of Carcinogenicity

Xylene (mixture of isomers) (CAS 1330-20-7) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity May damage fertility or the unborn child.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure Causes damage to organs (liver, kidney) through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Organic solvents may be absorbed into the body by inhalation and ingestion and cause permanent damage to the nervous system, including the brain. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. May damage fertility or the unborn child.

Further information Symptoms may be delayed.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
Xylene (mixture of isomers) (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	7.711 - 9.591 mg/l, 96 hours

Persistence and degradability The product is biodegradable.

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient n-octanol / water (log Kow)

3.12 - 3.2

Mobility in soil No data available.

Other adverse effects The product is a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Dispose of this material and its container at hazardous or special waste collection point. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 °F

US RCRA Hazardous Waste U List: Reference

Xylene (mixture of isomers) (CAS 1330-20-7) U239

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1307
UN proper shipping name	Xylenes
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	III
Special precautions for user	Not available.
Special provisions	B1, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242
ERG number	130

IATA

UN number	UN1307
UN proper shipping name	Xylenes
Transport hazard class(es)	3
Subsidiary class(es)	-
Packaging group	III
Environmental hazards	No
Labels required	3
ERG Code	3L
Special precautions for user	Not available.

IMDG

UN number	UN1307
UN proper shipping name	Xylenes
Transport hazard class(es)	3
Subsidiary class(es)	-
Packaging group	III
Environmental hazards	
Marine pollutant	No
Labels required	3
EmS	F-E, S-D
Special precautions for user	Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Xylene (mixture of isomers) (CAS 1330-20-7) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
No

SARA 311/312 Hazardous chemical
Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Xylene (mixture of isomers)	1330-20-7	100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Xylene (mixture of isomers) (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)
Hazardous substance

Safe Drinking Water Act (SDWA)
10 mg/l
10 mg/l

Food and Drug Administration (FDA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Xylene (mixture of isomers) (CAS 1330-20-7)

US. New Jersey Worker and Community Right-to-Know Act

Xylene (mixture of isomers) (CAS 1330-20-7) 500 lbs

US. Pennsylvania RTK - Hazardous Substances

Xylene (mixture of isomers) (CAS 1330-20-7)

US. Rhode Island RTK

Xylene (mixture of isomers) (CAS 1330-20-7)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) 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 Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

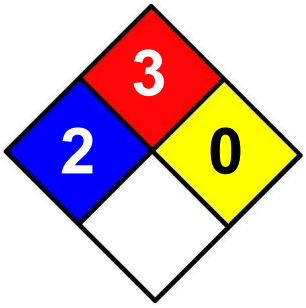
16. Other information, including date of preparation or last revision

Issue date 22-September-2013

Revision date -

Version # 01

NFPA Ratings



List of abbreviations

LD50: Lethal Dose, 50%.
LC50: Lethal Concentration, 50%.
EC50: Effective concentration, 50%.

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment. The information in the sheet was written based on the best knowledge and experience currently available.