



SAFETY DATA SHEET

SDS ID NO.: 0158MAR019

Revision date 12/28/2021

1. IDENTIFICATION

Product Name	Marathon Petroleum Xylene
Synonym	Xylene; Mixed Xylenes, Dimethyl Benzene; Methyl Toluene; Para-Rich Xylene; ARU Xylene
Product code	0158MAR019
Chemical family	Aromatic Hydrocarbon
Recommended use	Solvent. Chemical intermediate. Gasoline blending.
Restrictions on use	All others.
Manufacturer, Importer, or Responsible Party Name and Address	MARATHON PETROLEUM COMPANY LP 539 South Main Street Findlay, OH 45840
SDS Information	1-419-421-3070 (M-F; 8-5 EST)
24 Hour Emergency Telephone	1-877-627-5463

2. HAZARD IDENTIFICATION

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification

Flammable liquids	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1

Hazards Not Otherwise Classified (HNOC)

Static accumulating flammable liquid

Label Elements

Danger

FLAMMABLE LIQUID AND VAPOR

May accumulate electrostatic charge and ignite or explode

May be fatal if swallowed and enters airways

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation

May cause drowsiness or dizziness

Suspected of causing cancer

Suspected of damaging the unborn child

May cause damage to organs (auditory system, nervous system) through prolonged or repeated exposure

**Appearance** Clear Liquid**Physical State** Liquid**Odor** Sweet Aromatic**Precautionary Statements - 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
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wash hands and any possibly exposed skin thoroughly after handling
 Avoid release to the environment

Precautionary Statements - Response

IF exposed or concerned: Get medical 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 attention
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 If skin irritation occurs: Get medical attention
 Take off contaminated clothing and wash before reuse
 If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing
 Call a poison center or doctor if you feel unwell
 If swallowed: Immediately call a poison center or doctor
 Do NOT induce vomiting
 In case of fire: Use water spray, fog or regular foam for extinction

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Xylene is a mixture of eight carbon aromatic petroleum hydrocarbons composed of the three isomers of xylene (ortho, meta & para) and ethylbenzene.

Composition Information

Name	CAS Number	% Concentration
Xylene (mixed isomers)	1330-20-7	78-99
Ethylbenzene	100-41-4	1.5-20
Cumene	98-82-8	0-1.0
Toluene	108-88-3	0-0.7

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First aid measures

General advice	In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).
Inhalation	Remove to fresh air. If not breathing, utilize bag valve mask or other form of barrier device to institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. Get immediate medical attention.
Skin contact	Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation persists. Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties.
Eye contact	Flush immediately with large amounts of water for at least 15 minutes. Gently remove contacts while flushing. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.
Ingestion	Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. Get immediate medical attention.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse effects	Acute: Headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Delayed: Dry skin and possible irritation with repeated or prolonged exposure.
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Indication of any immediate medical attention and special treatment needed

Notes to physician	INHALATION: This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided. INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	For small fires, Class B fire extinguishing media such as CO ₂ , dry chemical, foam or water spray can be used. For large fires, water spray, fog or foam can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.
Unsuitable extinguishing media	Do not use straight water streams to avoid spreading fire.
Specific hazards arising from the chemical	This product has been determined to be a flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 130.

Hazardous combustion products	Smoke, carbon monoxide, and other products of incomplete combustion.
Explosion data	
Sensitivity to mechanical impact:	No.
Sensitivity to static discharge:	No.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.
Additional firefighting tactics	<p>FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after the fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.</p> <p>EVACUATION: Consider initial downwind evacuation for at least 1000 feet. If tank, rail car or tank truck is involved in a fire, ISOLATE for 5280 feet (1 mile) in all directions; also, consider initial evacuation of 5280 feet (1 mile) in all directions.</p>
NFPA	Health 2 Flammability 3 Instability 0 Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.
Protective equipment	Use personal protection measures as recommended in Section 8.
Emergency procedures	Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
Environmental precautions	Avoid release to the environment. Avoid subsoil penetration.
Methods and materials for containment	Contain liquid with sand or soil.
Methods and materials for cleaning up	Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools.

7. HANDLING AND STORAGE

Safe handling precautions	NEVER SIPHON THIS PRODUCT BY MOUTH. Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Use only non-sparking tools. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.
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Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition of vapors or mists without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

Storage conditions Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Name	ACGIH TLV	OSHA PELs	NIOSH IDLH
Xylene (mixed isomers) 1330-20-7	100 ppm TWA 150 ppm STEL	TWA: 100 ppm TWA: 435 mg/m ³	900 ppm
Ethylbenzene 100-41-4	20 ppm TWA	TWA: 100 ppm TWA: 435 mg/m ³	800 ppm
Cumene 98-82-8	5 ppm TWA	TWA: 50 ppm TWA: 245 mg/m ³ Skin	900 ppm
Toluene 108-88-3	20 ppm TWA OTO - potential to cause hearing impairment alone or in combination with noise	TWA: 200 ppm Ceiling: 300 ppm	500 ppm

Notes: No further information available.

Engineering measures Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection Use goggles or face-shield if there is a potential for splashing.

Skin and body protection Viton® gloves should be used to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection Approved organic vapor chemical cartridge or supplied air respirators should be worn for exposures to any components exceeding the established exposure limits. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear Liquid
Physical State	Liquid
Color	Colorless
Odor	Sweet Aromatic
Odor Threshold	0.4 ppmv

<u>Property</u>	<u>Values (method)</u>
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pH	Not Applicable
Melting Point / Freezing Point	-29.4 °C / -20.9 °F
Initial Boiling Point / Boiling Range	136-142 °C / 277-288 °F
Flash Point	27 °C / 81 °F
Evaporation Rate	0.76 (Butyl Acetate = 1)
Flammability (solid, gas)	No available data.
Flammability Limit in Air (%):	
Upper Flammability Limit:	7.0
Lower Flammability Limit:	0.9
Explosion Limits	No data available.
Vapor Pressure	No data available.
Vapor Density	3.66 (Air=1)
Specific Gravity / Relative Density	0.86-0.88
Water Solubility	Insoluble
Partition Coefficient	3.12-3.20 Log Kow
Autoignition Temperature	465 °C / 869 °F
Decomposition Temperature	No data available.
Kinematic Viscosity	No data available.
VOC Content (%)	No data available.
Softening Point	Not Applicable
Density	7.25 lbs/gal

10. STABILITY AND REACTIVITY

Reactivity	The product is non-reactive under normal conditions.
Chemical stability	The material is stable at 70°F (21°C), 760 mmHg pressure.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Will not occur.
Conditions to avoid	Sources of heat or ignition.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation	May cause irritation of respiratory tract. May cause drowsiness or dizziness. Breathing high concentrations of this material, for example, in a confined space or by intentional abuse, can cause irregular heartbeats which can cause death.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin. Repeated exposure may cause skin dryness or cracking.
Ingestion	May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Xylene (mixed isomers) 1330-20-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.04 mg/L (Rat) 4 h
Ethylbenzene 100-41-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h
Cumene	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 20 mg/L (Rat) 6 h

98-82-8			
Toluene 108-88-3	> 2000 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h

Immediate and delayed effects as well as chronic effects from short and long-term exposure

XYLENE: Overexposure to airborne xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, nervous system damage and narcosis. Impaired neurological function has been reported in workers exposed to solvents including xylene. Laboratory animal studies have shown evidence of impaired hearing after prolonged exposure high airborne concentrations. Laboratory animal studies suggest some changes in reproductive organs after exposure to high airborne concentrations of xylene without an effect on reproduction. Skeletal and visceral malformations, developmental delays, and increased fetal resorptions were observed in laboratory animals after extremely high airborne concentrations with evidence of maternal toxicity. Adverse effects on the liver, kidney, and bone marrow were observed in laboratory animals after prolonged and repeated exposure to high airborne concentrations of xylene.

ETHYLBENZENE: Lifetime exposure studies of rodents to ethylbenzene reported elevated kidney tumors in male and female rats exposed to the highest concentration tested. Tumors of the lungs were elevated in male mice and in the livers of females exposed at the highest concentration tested. Effects on the liver, kidney, lung, thyroid, and pituitary of these animals as well. Laboratory animal studies (rats) demonstrated hearing loss in combination with exposure to noise.

CUMENE: High airborne concentrations of cumene may cause irritation of the eyes, skin, and respiratory tract. Excessive exposures may cause central nervous system effects. Lifetime inhalation exposure of mice to cumene resulted in lung tumors in both males and females and liver tumors in females. Rats similarly exposed to cumene exhibited male-specific kidney tumors.

TOLUENE: Inhalation abuse of toluene at high concentrations has been associated with adverse effects on the liver, kidney and nervous system, and can cause nervous system depression, cardiac arrhythmias, and death. Studies of workers indicate long-term exposure may be related to impaired color vision and hearing. Some studies of workers suggest long-term exposure may be associated with neurobehavioral and mental functional changes. Laboratory animal studies indicate some changes in reproductive organs after exposure to high airborne concentrations, but no significant effects on mating performance or reproduction were observed. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following maternal exposure to high concentrations. Adverse effects on the liver, kidney, thymus and nervous system of laboratory animal were observed after very high levels of prolonged and repeated exposure.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and symptoms	Respiratory tract irritation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue.
Acute toxicity	None known.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Sensitization	Not expected to be a skin or respiratory sensitizer.
Mutagenic effects	None known.
Carcinogenicity	Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Xylene (mixed isomers) 1330-20-7	Not classifiable (A4)	Not classifiable (3)	Not Listed	Not Listed
Ethylbenzene 100-41-4	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Cumene 98-82-8	Not Listed	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed
Toluene 108-88-3	Not classifiable (A4)	Not classifiable (3)	Not Listed	Not Listed

Reproductive toxicity Suspected of damaging the unborn child.

Specific Target Organ Toxicity (STOT) - single exposure May cause drowsiness or dizziness. May cause respiratory irritation.

Specific Target Organ Toxicity (STOT) - repeated exposure May cause damage to organs (auditory system, nervous system) through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Fish	Crustacea	Algae/aquatic plants
Xylene (mixed isomers) 1330-20-7	96-hr LC50 = 8 mg/l Rainbow trout	48-hr LC50 = 3.82 mg/l Daphnia magna	72-hr EC50 = 11 mg/l Algae
Ethylbenzene 100-41-4	96-hr LC50 = 4 mg/L Rainbow trout	48-hr EC50 = 1-4 mg/L Daphnia magna	72-hr EC50 = 1.7-7.6 mg/l Algae
Cumene 98-82-8	96-hr LC50 = 6.04-6.61 mg/l Fathead minnow (Flow-through) 96-hr LC50 = 2.7 mg/l Rainbow trout (semi-static)	48-hr EC50 = 7.9-14.1 mg/l Daphnia magna (static)	72-hr EC50 = 2.6 mg/l Algae
Toluene 108-88-3	96-hr LC50 <= 10 mg/l Rainbow trout	48-hr EC50 = 5.46-9.83 mg/l Daphnia magna 48-hr EC50 = 11.5 mg/l Daphnia magna (Static)	72-hr EC50 = 12.5 mg/l Algae

Persistence and degradability Readily biodegradable in the environment.

Bioaccumulation Not expected to bioaccumulate in aquatic organisms.

Mobility in soil May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of waste residues This material may be a flammable liquid waste.

Safe handling of wastes Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of wastes / methods of disposal The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Contaminated packaging disposal Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT

UN/Identification No:	UN 1307
UN Proper Shipping Name:	Xylenes
Transport Hazard Class(es):	3
Packing Group:	III

IATA

UN/Identification No:	UN 1307
UN Proper Shipping Name:	Xylenes
Transport Hazard Class(es):	3
Packing Group:	III
ERG code:	3L

IMDG

UN/Identification No:	UN 1307
UN Proper Shipping Name:	Xylenes
Transport Hazard Class(es):	3
Packing Group:	III
EmS No:	F-E, S-D
Marine Pollutant:	No

15. REGULATORY INFORMATION

Regulatory Information

US TSCA Chemical Inventory This product and/or its components are listed on the TSCA Chemical Inventory or are exempt.

Canada DSL/NDSL Inventory This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

EPA Superfund Amendment & Reauthorization Act (SARA)

SARA Section 302 This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List above the de minimis threshold.

SARA Section 304 This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Xylene (mixed isomers) 1330-20-7	100 lb 45.4 kg
Ethylbenzene 100-41-4	1000 lb 454 kg
Cumene 98-82-8	5000 lb 2270 kg
Toluene 108-88-3	1000 lb 454 kg

SARA Section 311/312 The following EPA hazard categories apply to this product:

Flammable
Hazard Not Otherwise Classified (HNOC)-Physical
Skin corrosion or irritation
Serious eye damage or eye irritation
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity
Aspiration hazard

SARA Section 313 This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting
Xylene (mixed isomers) 1330-20-7	1.0 % de minimis concentration
Ethylbenzene 100-41-4	0.1 % de minimis concentration
Cumene 98-82-8	0.1 % de minimis concentration
Toluene 108-88-3	1.0 % de minimis concentration

U.S. State Regulations**California Proposition 65**

This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Name	California Proposition 65
Ethylbenzene 100-41-4	Carcinogen, initial date 06/11/04
Cumene 98-82-8	Carcinogen, initial date 04/06/10
Toluene 108-88-3	Developmental toxicity, initial date 01/01/91

For more information, go to www.P65Warnings.ca.gov.

State Right-To-Know Regulations The following component(s) of this material are identified on the regulatory lists below:

Name	New Jersey Right-To-Know	Pennsylvania Right-To-Know	Massachusetts Right-To-Know
Xylene (mixed isomers) 1330-20-7	Listed	Listed	Listed
Ethylbenzene 100-41-4	Listed	Listed	Listed
Cumene 98-82-8	Listed	Listed	Listed
Toluene 108-88-3	Listed	Listed	Listed

16. OTHER INFORMATION

Prepared by

Toxicology & Product Safety

NFPA**Revision Notes****Revision date**

12/28/2021

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The

information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.