SAFETY DATA SHEET

SDS ID NO.: 0135MAR019 **Revision date** 12/28/2021

1. IDENTIFICATION

Product Name Marathon Petroleum LPG Transmix

Synonym Gasoline/LPG Mix; Pipeline LPG Slop; Pipeline LPG Transmix
Product code 0135MAR019
Chemical family Hydrocarbon Mixture

Recommended use Feedstock.
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 CHEMTREC: 1-800-424-9300 (CCN# 13740)

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 1
Simple asphyxiant	-
Skin corrosion/irritation	Category 2
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1 Category 2
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

Hazards Not Otherwise Classified (HNOC)
Static accumulating flammable liquid
Liquid product may cause freeze burn

Label Elements

Danger

EXTREMELY FLAMMABLE LIQUID AND VAPOR
May accumulate electrostatic charge and ignite or explode
May displace oxygen and cause rapid suffocation
May be fatal if swallowed and enters airways

Contact with liquid product may cause freeze burn.
Causes skin irritation
May cause respiratory irritation
May cause drowsiness or dizziness
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
Causes damage to organs (blood, blood-forming organs, immune system) through prolonged or repeated exposure
Toxic to aquatic life with long lasting effects

Appearance Clear Liquid **Physical State** Liquid **Odor** Hydrocarbon

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
Avoid breathing mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
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 on skin: Wash with plenty of soap and water
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
Collect spillage

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

LPG Transmix is a complex mixture of varying proportions of gasoline and liquified petroleum gas. Contains paraffins, cycloparaffins, olefins and aromatic hydrocarbons having hydrocarbon chain lengths predominantly in the range of three to sixteen

carbons. May contain small amounts of dye and other additives (>0.02%) which are not considered hazardous at the concentrations used.

Composition Information

Name	CAS Number	% Concentration
Isobutane	75-28-5	0-100
Gasoline	86290-81-5	0-85
Heptane (mixed isomers)	142-82-5	2-25
Isopentane	78-78-4	0-11
Hexane Isomers (other than n-Hexane)	107-83-5	1-11
n-Butane	106-97-8	0-10
Toluene	108-88-3	2-8
Xylene (mixed isomers)	1330-20-7	3-8
n-Pentane	109-66-0	0-6
Trimethylbenzene (mixed isomers)	25551-13-7	1-5
n-Hexane	110-54-3	0.1-4
Cumene	98-82-8	0-4
Propane	74-98-6	0-3
Ethylbenzene	100-41-4	0.5-2
Benzene	71-43-2	0.1-1.3
Naphthalene	91-20-3	0-0.5

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). Get immediate medical attention.

Skin contact If liquefied product has caused frostbite, remove contaminated clothing. Thaw frost bitten areas slowly with lukewarm water or by wrapping affected areas with blankets. Do not rub affected areas. Let circulation reestablish itself naturally, exercising area if possible. Get immediate medical attention.

Eye contact Flush with large amounts of tepid water for at least 15 minutes. Gently remove contact lenses while flushing. Eyelids should beheld away from the eyeball to ensure thorough rinsing. If frostbite is suspected (cloudy lens or greyish white tissue around the eye) get immediate medical attention.

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. Get immediate medical attention.

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

Adverse effects Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Contact with product may cause frostbite. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Asphyxiant gas. High concentrations in the immediate area can displace oxygen causing the feeling of suffocation and can cause headache, drowsiness, dizziness, loss of

coordination, disorientation and fatigue from oxygen deprivation.

Indication of any immediate medical attention and special treatment needed

Notes to physician

INHALATION: Hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators. Treat symptomatically. Administer supplemental oxygen as needed.

INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO2, 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. For small fires, Class B fire extinguishing media such as CO2 or dry chemical can be used. For large fires use water spray or fog.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

This product has been determined to be an extremely 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. Sealed containers may rupture when heated. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 128. For additional fire related information see NFPA 30 or the Emergency Response Guidebook 115.

Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to mechanical impact: No.

Sensitivity to static discharge: Yes.

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. Use extreme caution when fighting liquefied petroleum gas fires. Avoid use of solid water streams. Contact with water and liquefied product can cause increased vaporization. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Avoid excessive water spray application. Keep run-off water out of sewers and water sources. Water spray and foam must be applied carefully to avoid frothing and from as far a distance as possible.

Additional firefighting tactics

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.

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.

NFPA	Health 2	Flammability 4	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. Distant ignition and flashback are possible. Use grounded and bonded, explosion-proof equipment. Monitor area for flammable or explosive atmosphere. Before entry, especially into confined areas, check atmosphere with an appropriate monitor.

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 If leaking, take appropriate steps to disperse gas. Avoid release to the environment. Avoid subsoil penetration. Ethanol in gasoline phase seperates in contact with water. Monitor downstream for dissolved ethanol or other appropriate indicators.

Methods and materials for containment Contain liquid with sand or soil. Prevent spilled material from entering storm drains, sewers, and open waterways.

Methods and materials for cleaning up Shut off gas supply, if safe to do so. Allow equipment to depressurize. Isolate area until gas has dispersed. 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 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. Gas and/or vapors may accumulate along the ground, settle in low lying areas 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. No smoking. Use only non-sparking tools. Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapors. Use only with adequate ventilation. Use personal protection measures as recommended in Section 8. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements.

Storage conditions Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Keep product and empty container away from heat and sources of ignition.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Name	ACGIH TLV	OSHA PELS	NIOSH IDLH
Isobutane 75-28-5	1000 ppm STEL	-	-
Gasoline 86290-81-5	300 ppm TWA 500 ppm STEL	-	-
Heptane (mixed isomers) 142-82-5	400 ppm TWA 500 ppm STEL	TWA: 500 ppm TWA: 2000 mg/m^3	750 ppm

Isopentane 78-78-4	1000 ppm TWA	-	-
Hexane Isomers (other than n-Hexane) 107-83-5	500 ppm TWA 1000 ppm STEL	-	-
n-Butane 106-97-8	1000 ppm STEL	-	1600 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
Xylene (mixed isomers) 1330-20-7	100 ppm TWA 150 ppm STEL	TWA: 100 ppm TWA: 435 mg/m^3	900 ppm
n-Pentane 109-66-0	1000 ppm TWA	TWA: 1000 ppm TWA: 2950 mg/m^3	1500 ppm
Trimethylbenzene (mixed isomers) 25551-13-7	25 ppm TWA	-	-
n-Hexane 110-54-3	50 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 500 ppm TWA: 1800 mg/m^3	1100 ppm
Cumene 98-82-8	5 ppm TWA	TWA: 50 ppm TWA: 245 mg/m^3 Skin	900 ppm
Propane 74-98-6	Simple asphyxiant	TWA: 1000 ppm TWA: 1800 mg/m^3	2100 ppm
Ethylbenzene 100-41-4	20 ppm TWA	TWA: 100 ppm TWA: 435 mg/m^3	800 ppm
Benzene 71-43-2	0.5 ppm TWA 2.5 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 1 ppm STEL: 5 ppm TWA: 10 ppm (applies to industry segments exempt from the benzene standard) (see 29 CFR 1910.1028)	500 ppm
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m^3	250 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. Monitor atmospheric oxygen levels.

Personal protective equipment

Eye protection Use goggles or face-shield if the potential for splashing exists.

Skin and body protection Use nitrile rubber, Viton®, or PVA gloves to prevent skin exposure. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times. Wear appropriate protective clothing.

Respiratory protection Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. 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.

Note: Air purifying respirators are not to be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturers instructions), in oxygen deficient atmospheres, (less than 19.5% oxygen) or under conditions that are immediately dangerous to life and health (IDLH).

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes and clothing. Do not smoke while handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear Liquid
Physical State	Liquid
Color	Colorless to Yellow
Odor	Hydrocarbon
Odor Threshold	No data available.

Property	**Values (method)**
pH	Not applicable.
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	-42 °C / -44 °F (propane)
Flash Point	-104 °C / -155 °F (propane)
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	9.5
Lower Flammability Limit:	2.0 (propane)
Explosion Limits	No data available.
Vapor Pressure	No data available.
Vapor Density	2
Specific Gravity / Relative Density	0.56-0.76
Water Solubility	No data available.
Partition Coefficient	No data available.
Autoignition Temperature	237 °C / 460 °F
Decomposition Temperature	No data available.
Kinematic Viscosity	No data available.
VOC Content (%)	No data available.

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	Excessive heat, sources of ignition, open flame.
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. Some components of this product are anesthetic at high concentrations and can cause asphyxiation and death by displacement of oxygen from the breathing atmosphere. Victim may not be aware of asphyxiation.
Eye contact	Direct contact with liquefied product can cause freeze burn or frostbite. Gas or vapors may cause irritation to eyes.

Skin contact Causes skin irritation. Direct contact with liquefied product can cause freeze burn or frostbite. May be absorbed through the skin in harmful amounts.

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
Isobutane 75-28-5	-	-	570,000 ppm (Rat) 15 min
Gasoline 86290-81-5	14000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
Heptane (mixed isomers) 142-82-5	-	3000 mg/kg (Rabbit)	103 g/m³ (Rat) 4 h
Isopentane 78-78-4	-	-	450 mg/L (Mouse) 2 h
Hexane Isomers (other than n-Hexane) 107-83-5	> 5000 mg/kg (Rat)	-	-
n-Butane 106-97-8	-	-	658 mg/L (Rat) 4 h
Toluene 108-88-3	> 2000 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h
Xylene (mixed isomers) 1330-20-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.04 mg/L (Rat) 4 h
n-Pentane 109-66-0	> 2000 mg/kg (Rat)	-	364 mg/L (Rat) 4 h
Trimethylbenzene (mixed isomers) 25551-13-7	3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	18,000 mg/m³ (Rat) 4 h
n-Hexane 110-54-3	15000 mg/kg (Rat)	3000 mg/kg (Rabbit)	48000 ppm (Rat) 4 h
Cumene 98-82-8	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 20 mg/L (Rat) 6 h
Propane 74-98-6	-	-	> 1,464 mg/L (Rat) 15 min
Ethylbenzene 100-41-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h
Benzene 71-43-2	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 20 mg/l (Rat) 4 h
Naphthalene 91-20-3	533 mg/kg (Mouse)	> 2000 mg/kg (Rabbit)	> 340 mg/m³ (Rat) 1 h

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

PROPANE, BUTANE and PENTANE: Laboratory animal studies indicate exposure to extremely high levels (1 to 10 vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

GASOLINE: Gasoline blending streams, or naphthas, may be fatal if swallowed and enter the airway. Vapors may be irritating if inhaled. Altered mental state, drowsiness, dizziness, peripheral motor neuropathy, irreversible brain damage (gasoline sniffer's neuropathy), delirium, seizures, and sudden death have been reported from repeated exposure or overexposure. Lifetime exposure of laboratory mice and rats to wholly-vaporized unleaded gasoline produced an increased incidence of liver tumors in female mice at the highest exposure concentration and α-2 urinary globulin-mediated kidney tumors in male rats. Lifetime repeated application of various gasoline blending streams or naphthas to the skin of mice caused an irritation-dependent increased incidence of skin tumors. These tumors occur through a mechanism of questionable human relevance.

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.

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.

1,2,4-TRIMETHYLBENZENE: Contact with eyes can cause serious eye irritation, redness, and pain. Brief inhalation exposure to high vapor concentrations may cause respiratory irritation. Overexposure by inhalation and ingestion can cause confusion, dizziness, drowsiness, headache, vomiting, cough, and sore throat. Long-term overexposure has been associated with asthmatic bronchitis. Direct prolonged skin contact can cause irritation, redness and dry skin.

N-HEXANE: Short-term overexposure to n-hexane vapor may cause headache, nausea, vomiting, dizziness, lightheadedness, loss of consciousness, coma, and even death in humans. Respiratory effects of overexposure may include nose, throat, and lung irritation, coughing, wheezing, and shortness of breath. Direct and prolonged contact with liquid may cause dryness and redness of the skin. Long-term or repeated overexposure to n-hexane can cause peripheral nerve damage. Initial signs are numbness of the fingers and toes. Motor/muscle weakness can occur in the digits, but may also involve muscles of the arms, forearms, and thighs. Onset of these signs may be delayed for several months to a year after initial exposure. Repeated and sustained inhalation exposure to high vapor concentrations of n-hexane resulted in degenerative changes in the testes and reduced sperm count in male laboratory rats.

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.

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.

BENZENE: Benzene exposure may cause skin, eye and respiratory irritation. Excessive exposures may cause central nervous system effects. Numerous studies of workers exposed to airborne benzene for prolonged or repeated periods show strong evidence that overexposure can cause cancer of the blood, AML (acute myeloid leukemia), along with other disorders indicating damage to the blood forming organs including aplastic anemia, leukopenia, thrombocytopenia, and the development of myelodysplastic syndrome. Some studies of pregnant women occupationally exposed to benzene suggest associations with an increased risk of miscarriage, stillbirth, reduced birth weight, and gestational age. Prolonged and repeated exposure to benzene has induced chromosomal aberrations in circulating human lymphocytes, in bone marrow cells of laboratory animals, and in sperm cells of both humans and laboratory animals.

NAPHTHALENE: Excessive exposure to naphthalene may cause nausea, vomiting, diarrhea, blood in the urine, and a yellow color to the skin. Lifetime inhalation exposure of laboratory rodents to naphthalene resulted in cancers of the respiratory tract in male and female rats. A small increase in cancer of the lung was observed in female mice, but no evidence of lung cancer was observed in male mice. Long-term exposure to excessive airborne naphthalene concentrations may result in destruction of red blood cells, a condition referred to as hemolytic anemia.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and symptoms	Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Contact with product may cause frostbite. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Asphyxiant gas. High concentrations in the immediate area can displace oxygen causing the feeling of suffocation and can cause headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue from oxygen deprivation.
Acute toxicity	None known.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation None known.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects May cause genetic defects.

Carcinogenicity May cause cancer. Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Gasoline 86290-81-5	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Toluene 108-88-3	Not classifiable (A4)	Not classifiable (3)	Not Listed	Not Listed
Xylene (mixed isomers) 1330-20-7	Not classifiable (A4)	Not classifiable (3)	Not Listed	Not Listed
Cumene 98-82-8	Not Listed	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed
Ethylbenzene 100-41-4	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Benzene 71-43-2	Confirmed human carcinogen (A1)	Carcinogenic to humans (1)	Known to be human carcinogen	Known carcinogen
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed

Reproductive toxicity Suspected of damaging fertility or the unborn child.

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

Specific Target Organ Toxicity (STOT) - repeated exposure Causes damage to organs (blood, blood-forming organs, immune 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
Gasoline 86290-81-5	96-hr LC50 = 11 mg/l Rainbow trout (static)	48-hr LC50 = 7.6 mg/l Daphnia magna	72-hr EC50 = 56 mg/l Algae
Heptane (mixed isomers) 142-82-5	96-hr LC50 = 375 mg/L Tilapia	-	-
Isopentane 78-78-4	96-hr LC50 = 3.1 mg/L Rainbow trout	48-hr EC50 = >1 - <10 mg/L Daphnia magna	-
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
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
n-Pentane 109-66-0	96-hr LC50 >1 - <10 mgL Rainbow trout	48-hr EC50 = 9.7 mg/L Daphnia magna	-
Trimethylbenzene (mixed isomers) 25551-13-7	96-hr LC50 = 7.19-8.28 mg/l Fathead minnow (flow-through)	48-hr EC50 = 6.14 mg/L Daphnia magna	-
n-Hexane 110-54-3	96-hr LC50 = 2.5 mg/l Fathead minnow	-	-

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
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
Benzene 71-43-2	96-hr LC50 = 5.3 mg/l Rainbow trout (flow-through)	48-hr EC50 = 8.76-15.6 mg/l Daphnia magna (Static)	72-hr EC50 = 29 mg/l Algae
Naphthalene 91-20-3	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	48-hr LC50 = 1.6 mg/l Daphnia magna	-

Persistence and degradability Expected to be inherently biodegradable.

Bioaccumulation Has the potential to bioaccumulate.

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 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 3295
UN Proper Shipping Name: Hydrocarbons, Liquid, N.O.S.
Transport Hazard Class(es): 3
Packing Group: I

TDG

UN/Identification No: UN 3295
UN Proper Shipping Name: Hydrocarbons, Liquid, N.O.S.
Transport Hazard Class(es): 3
Packing Group: I

IATA

UN/Identification No: UN 3295
UN Proper Shipping Name: Hydrocarbons, Liquid, N.O.S.
Transport Hazard Class(es): 3
Packing Group: I

IMDG

UN/Identification No: UN 3295
UN Proper Shipping Name: Hydrocarbons, Liquid, N.O.S.

Transport Hazard Class(es):	3
Packing Group:	I
EmS No:	F-E, S-D
Marine Pollutant:	Yes

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
Toluene 108-88-3	1000 lb 454 kg
Xylene (mixed isomers) 1330-20-7	100 lb 45.4 kg
n-Hexane 110-54-3	5000 lb 2270 kg
Cumene 98-82-8	5000 lb 2270 kg
Ethylbenzene 100-41-4	1000 lb 454 kg
Benzene 71-43-2	10 lb 4.54 kg
Naphthalene 91-20-3	100 lb 45.4 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
Carcinogenicity
Germ cell mutagenicity
Reproductive toxicity
Specific target organ toxicity
Aspiration hazard
Simple asphyxiant
Hazard Not Otherwise Classified (HNOC)-Health

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
Toluene	1.0 % de minimis concentration

108-88-3	
Xylene (mixed isomers) 1330-20-7	1.0 % de minimis concentration
n-Hexane 110-54-3	1.0 % de minimis concentration
Cumene 98-82-8	0.1 % de minimis concentration
Ethylbenzene 100-41-4	0.1 % de minimis concentration
Benzene 71-43-2	0.1 % de minimis concentration
Naphthalene 91-20-3	0.1 % 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
Gasoline 86290-81-5	Unleaded (wholly vaporized), Carcinogen, initial date 04/01/88 Engine exhaust, Carcinogen, initial date 10/01/90
Toluene 108-88-3	Developmental toxicity, initial date 01/01/91
n-Hexane 110-54-3	Male reproductive toxicity, initial date 12/15/17
Cumene 98-82-8	Carcinogen, initial date 04/06/10
Ethylbenzene 100-41-4	Carcinogen, initial date 06/11/04
Benzene 71-43-2	Carcinogen, initial date 02/27/87 Male developmental toxicity, initial date 12/26/97
Naphthalene 91-20-3	Carcinogen, initial date 04/19/2002

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
Isobutane 75-28-5	Listed	Listed	Listed
Gasoline 86290-81-5	Listed	Listed	Listed
Heptane (mixed isomers) 142-82-5	Listed	Listed	Listed
Isopentane 78-78-4	Listed	Listed	Listed
Hexane Isomers (other than n-Hexane) 107-83-5	Listed	Listed	Listed
n-Butane 106-97-8	Listed	Listed	Listed
Toluene 108-88-3	Listed	Listed	Listed
Xylene (mixed isomers) 1330-20-7	Listed	Listed	Listed
n-Pentane 109-66-0	Listed	Listed	Listed
Trimethylbenzene (mixed	Listed	Listed	Listed

isomers) 25551-13-7			
n-Hexane 110-54-3	Listed	Listed	Listed
Cumene 98-82-8	Listed	Listed	Listed
Propane 74-98-6	Listed	Listed	Listed
Ethylbenzene 100-41-4	Listed	Listed	Listed
Benzene 71-43-2	Listed	Listed	Listed
Naphthalene 91-20-3	Listed	Listed	Listed

16. OTHER INFORMATION

Prepared by Toxicology & Product Safety

NFPA

Revision Notes

Revision date 12/28/2021
Revised sections The following sections (§) have been updated:
2. HAZARD IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
6. ACCIDENTAL RELEASE MEASURES
7. HANDLING AND STORAGE
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
9. PHYSICAL AND CHEMICAL PROPERTIES
11. TOXICOLOGICAL INFORMATION
13. DISPOSAL CONSIDERATIONS

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.