



# SAFETY DATA SHEET

SDS ID NO.: 0104MAR019  
Revision Date: 05/14/2015

## 1. IDENTIFICATION

**Product Name:** Marathon Petroleum Propylene - All Grades  
**Synonym:** Refinery Propylene; Refinery Grade Propylene; Polymer Grade Propylene; 0103MAR019; 0102MAR019; 0322MAR019  
**Chemical Family:** Hydrocarbon Gas  
**Recommended Use:** Chemical intermediate.  
**Use Restrictions:** All others.

**Supplier Name and Address:**  
**MARATHON PETROLEUM COMPANY LP**  
**539 South Main Street**  
**Findlay, OH 45840**

**SDS information:** 1-419-421-3070  
**Emergency Telephone:** 1-877-627-5463

## 2. HAZARD IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

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

Flammable gases	Category 1
Gases under pressure	Liquefied Gas
Simple Asphyxiant	-

#### **Hazards Not Otherwise Classified (HNOC)**


Static accumulating flammable liquid  
Liquid product may cause freeze burn  
May release hydrogen sulfide gas

### Label elements

#### **EMERGENCY OVERVIEW**

#### **Danger**

Extremely flammable gas  
Contains gas under pressure; may explode if heated  
May accumulate electrostatic charge and ignite or explode  
May displace oxygen and cause rapid suffocation  
Contact with liquid product may cause freeze burn  
May release highly toxic hydrogen sulfide gas that quickly fatigues the sense of smell



**Appearance** Colorless Liquefied Gas
**Physical State** Liquefied Gas
**Odor** No available data.

**Precautionary Statements - Prevention**

Keep away from heat/sparks/open flames/hot surfaces. — No smoking

**Precautionary Statements - Response**

Leaking gas fire: Do not extinguish, unless leak can be stopped safely  
Eliminate all ignition sources if safe to do so

**Precautionary Statements - Storage**

Store in a well-ventilated place  
Protect from sunlight

**Precautionary Statements - Disposal**

Dispose of contents/container at an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Composition Information:**

Name	CAS Number	Weight %
Propylene	115-07-1	60-99
Propane	74-98-6	1-36
Isobutane	75-28-5	0-6.5
n-Butane	106-97-8	0-3.5
Ethane	74-84-0	0-1.0
Benzene	71-43-2	0-0.06
Hydrogen sulfide	7783-06-4	0-0.03

### 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, 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:** Liquid: Flush with large amounts of tepid water for at least 15 minutes. If frostbite is suspected (cloudy lens or greyish white tissue around the eye), GET IMMEDIATE MEDICAL ATTENTION.  
Gas: Call a physician if signs or symptoms of contact occur, including irritation.

**Ingestion:** Ingestion not likely. If swallowed, immediately call a poison control center or physician.

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

**Adverse Effects:** 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:** Treat symptomatically. Administer supplemental oxygen as needed. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media**  
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. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

**Unsuitable extinguishing media**  
DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

**Specific hazards arising from the chemical**  
This product has been determined to be an extremely flammable gas per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Sealed containers may rupture when heated. A phenomena known as boiling liquid expanding vapor explosions (Bleve) can occur when a liquid in a pressurized container comes in close proximity to a fire and reaches a temperature well above its boiling point. A catastrophic failure of the vessel can occur, resulting in flying equipment fragments, a shock wave and a fireball causing serious damage and death. 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. Isolate hazard area. If safe to do so, stop the flow of gas and allow fire to burn out. Extinguishing the flame before shutting off the supply can cause the formation of explosive mixtures. In some cases it may be preferred to allow the flame to continue to burn. Use extreme caution when fighting liquefied petroleum gas fires. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Avoid use of solid water streams. Contact with water and liquefied product can cause increased vaporization.

**NFPA:** Health 1 Flammability 4 Instability 1 Special Hazards -

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Keep people away from and upwind of spill/leak. Isolate and evacuate area. Shut off source if safe to do so. Distant ignition and flashback are possible. Eliminate all ignition sources. 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:** Leaking containers should be moved outdoors or to well-ventilated area and contents transferred to a suitable container. Product vapor is heavier than air and can collect in low areas that are without sufficient ventilation. Notify local health and pollution control agencies, if appropriate.
- Environmental precautions:** If leaking, take appropriate steps to disperse gas.
- Methods and materials for containment:** Prevent further leakage or spillage if safe to do so.
- Methods and materials for cleaning up:** Shut off gas supply, if safe to do so. Isolate area until gas has dispersed.

## 7. HANDLING AND STORAGE

- Safe Handling Precautions:** Avoid breathing gas or mists. Use only with adequate ventilation. Gas 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. Flashback may occur along vapor trails. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Use only non-sparking tools Use appropriate grounding and bonding practices. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. 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.
- Harmful concentrations of hydrogen sulfide (H<sub>2</sub>S) gas can accumulate in excavations and low-lying areas as well as the vapor space of storage and bulk transport compartments. Stay upwind and vent open hatches before unloading. Sulfur containing products may cause polysulfide deposits (iron sulfide) to form inside iron storage tanks. These pyrophoric deposits, upon exposure to air, can ignite spontaneously.
- Storage Conditions:** Product is stored as a liquid but used in the gaseous state. 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. Do not puncture or incinerate container.
- Incompatible materials** Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELS:	OSHA - Vacated PELs	NIOSH IDLH
Propylene 115-07-1	500 ppm TWA	-	-	-
Propane 74-98-6	Simple asphyxiant	TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup>	1000 ppm TWA 1800 mg/m <sup>3</sup> TWA	2100 ppm
Isobutane 75-28-5	1000 ppm STEL	-	-	-
n-Butane 106-97-8	1000 ppm STEL	-	800 ppm TWA 1900 mg/m <sup>3</sup> TWA	-
Ethane 74-84-0	Simple asphyxiant	-	-	-

Benzene 71-43-2	0.5 ppm TWA 2.5 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028) TWA: 1 ppm STEL: 5 ppm (see 29 CFR 1910.1028)	25 ppm Ceiling 1 ppm TWA 5 ppm STEL	500 ppm
Hydrogen sulfide 7783-06-4	1 ppm TWA 5 ppm STEL	Ceiling: 20 ppm	10 ppm TWA 14 mg/m <sup>3</sup> TWA 15 ppm STEL 21 mg/m <sup>3</sup> STEL	100 ppm

**Notes:** The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

**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:** Goggles or faceshield may be needed when handling pressurized gases.

**Skin and body protection:** Wear insulated gloves to prevent skin contact and frostbite or freeze burn. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

**Respiratory protection:** Use atmosphere supplying respirators in the event of oxygen deficiency, when material produces vapors that exceed permissible limits, or when excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134.

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**

**Physical State** Liquefied Gas  
**Appearance** Colorless Liquefied Gas  
**Color** Colorless  
**Odor** No available data.  
**Odor Threshold** No available data.

<b>Property</b>	<b>Values (Method)</b>
<b>Melting Point / Freezing Point</b>	-185 °C / -302 °F
<b>Initial Boiling Point / Boiling Range</b>	-48 °C / -54 °F
<b>Flash Point</b>	-108 °C / -163 °F
<b>Evaporation Rate</b>	No available data.
<b>Flammability (solid, gas)</b>	Extremely flammable gas
<b>Flammability Limit in Air (%)</b>	
<b>Upper Flammability Limit:</b>	11
<b>Lower Flammability Limit:</b>	2
<b>Vapor Pressure</b>	7600 mm Hg @ 68°F
<b>Vapor Density</b>	1.48
<b>Specific Gravity / Relative Density</b>	0.51-0.55
<b>Water Solubility</b>	Appreciable 23%

<b>Solubility in other solvents</b>	No available data.
<b>Partition Coefficient</b>	No available data.
<b>Decomposition temperature:</b>	No available data.
<b>pH:</b>	Not applicable
<b>Autoignition Temperature</b>	460 °C / 860 °F
<b>Kinematic Viscosity</b>	No available data.
<b>Dynamic Viscosity</b>	No available data.
<b>Explosive Properties</b>	No available data.
<b>Softening Point</b>	No available data.
<b>VOC Content (%)</b>	No available data.
<b>Density</b>	32.38 lb/ft3
<b>Bulk Density</b>	Not Applicable

## 10. STABILITY AND REACTIVITY

<b><u>Reactivity</u></b>	The product is non-reactive under normal conditions.
<b><u>Chemical stability</u></b>	The material is stable at 70°F, 760 mmHg pressure.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Hazardous polymerization</u></b>	Does not polymerize except under special conditions (extreme temperatures, pressure, oxidizers).
<b><u>Conditions to avoid</u></b>	Sources of heat or ignition.
<b><u>Incompatible materials</u></b>	Strong oxidizing agents.
<b><u>Hazardous decomposition products</u></b>	None known under normal conditions of use.

## 11. TOXICOLOGICAL INFORMATION

**Potential short-term adverse effects from overexposures**

<b>Inhalation</b>	May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. In high concentration the gas may cause suffocation. Victim may not be aware of asphyxiation. May release highly toxic hydrogen sulfide gas that quickly fatigues the sense of smell. Concentrations of >1000 ppm will cause immediate unconsciousness and death through respiratory paralysis.
<b>Eye contact</b>	Vapor is generally non-irritating to eyes. Direct contact with liquefied product can cause freeze burn or frostbite.
<b>Skin contact</b>	Vapor is generally non-irritating to skin. Direct contact with liquefied product can cause freeze burn or frostbite.
<b>Ingestion</b>	Ingestion not likely.

**Acute Toxicological data**

Name	Oral LD50	Dermal LD50	Inhalation LC50
Propylene 115-07-1	-	-	658 mg/L (Rat) 4 h
Propane 74-98-6	-	-	> 1,464 mg/L (Rat) 15 min
Isobutane 75-28-5	-	-	570,000 ppm (Rat) 15 min
n-Butane 106-97-8	-	-	658 mg/L (Rat) 4 h

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Ethane 74-84-0	-	-	658 mg/L (Rat) 4 h
Benzene 71-43-2	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 20 mg/l (Rat) 4 h
Hydrogen sulfide 7783-06-4	-	-	444 ppm (Rat) 4 h

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

PROPYLENE: At extremely high levels propylene gas acts as a general anesthetic and central nervous system depressant. Studies in laboratory animals indicate evidence of mild, reversible hydrocarbon nephropathy in male rats exposed to levels of 1000-4,500 ppm propylene for 90-days. The International Agency for Research in Cancer (IARC) has determined that there is inadequate evidence in experimental animals for the carcinogenicity of propylene. Overall evaluation: Propylene is not classifiable as to its carcinogenicity to humans (Group 3).

PROPANE: Studies in laboratory animals indicate exposure to extremely high levels of propane (1 to 10 vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

BUTANES: Studies in laboratory animals indicate exposure to extremely high levels of butanes (1-10 or higher vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

ETHANE: Exposure to high levels produces weak central nervous system (CNS) depressant effects without significant potential for systemic toxicity. At very high levels can act as asphyxiant gas by diluting and displacing oxygen. Symptoms of persons exposed to oxygen deficient atmospheres include headache, dizziness, incoordination, cyanosis and narcosis. Extremely high concentrations can produce unconsciousness followed by death.

BENZENE: Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer and other diseases of the blood forming organs including Acute Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a case control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC. The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma.

HYDROGEN SULFIDE: Hydrogen sulfide gas has an unpleasant odor that diminishes with increased exposure. Eye irritation may occur at levels above 4 ppm. Olfactory fatigue occurs rapidly at levels of 50 ppm or higher. Odor is not a reliable warning property. Respiratory effects include irritation with possible pulmonary edema at levels above 50 ppm. At 500 ppm immediate loss of consciousness and death can occur. NIOSH has determined that 100 ppm hydrogen sulfide is immediately dangerous to life and health (IDLH).

**Adverse effects related to the physical, chemical and toxicological characteristics**

<b>Signs &amp; Symptoms</b>	Headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue.
<b>Sensitization</b>	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
Propylene 115-07-1	Not Listed	Not Classifiable (3)	Not Listed	Not Listed
Propane 74-98-6	Not Listed	Not Listed	Not Listed	Not Listed
Isobutane 75-28-5	Not Listed	Not Listed	Not Listed	Not Listed
n-Butane 106-97-8	Not Listed	Not Listed	Not Listed	Not Listed
Ethane 74-84-0	Not Listed	Not Listed	Not Listed	Not Listed
Benzene 71-43-2	Confirmed human carcinogen (A1)	Carcinogenic to humans (1)	Known to be human carcinogen	Known carcinogen
Hydrogen sulfide 7783-06-4	Not Listed	Not Listed	Not Listed	Not Listed

**Reproductive toxicity** None known.

**Specific Target Organ Toxicity (STOT) - single exposure** Not classified.

**Specific Target Organ Toxicity (STOT) - repeated exposure** Not classified.

**Aspiration hazard** Not applicable.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Not classified in terms of aquatic toxicity.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Propylene 115-07-1	-	-	-	-
Propane 74-98-6	-	-	-	-
Isobutane 75-28-5	-	-	-	-
n-Butane 106-97-8	-	-	-	-
Ethane 74-84-0	-	-	-	-
Benzene 71-43-2	72-hr EC50 = 29 mg/l Algae	96-hr LC50 = 5.3 mg/l Rainbow trout (flow-through)	-	48-hr EC50 = 8.76-15.6 mg/l Daphnia magna (Static)
Hydrogen sulfide 7783-06-4	-	96-hr LC50 = 0.016 mg/l Fathead minnow 96-hr LC50 = 0.013 mg/l Rainbow trout	-	-

**Persistence and degradability** Expected to be inherently biodegradable.

**Bioaccumulation** Not expected to bioaccumulate in aquatic organisms.

**Mobility in soil** Expected to rapidly partition to air.

**Other adverse effects** No information available.

**13. DISPOSAL CONSIDERATIONS**

**Description of Waste Residues**

No information available.

**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.

**Methods of 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 (49 CFR 172.101):**

**UN Proper shipping name:** Petroleum Gases, Liquefied  
**UN/Identification No:** UN 1075  
**Transport Hazard Class(es):** 2.1  
**Packing group:** Not applicable

**TDG (Canada):**

**UN Proper shipping name:** Petroleum Gases, Liquefied  
**UN/Identification No:** UN 1075  
**Transport Hazard Class(es):** 2.1  
**Packing group:** Not applicable

**15. REGULATORY INFORMATION**

**US Federal Regulatory Information:**

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

**EPA Superfund Amendment & Reauthorization Act (SARA):**

**SARA Section 302:** This product may contain component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Propylene	NA
Propane	NA
Isobutane	NA
n-Butane	NA
Ethane	NA
Benzene	NA
Hydrogen sulfide	500 lb TPQ

**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	CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Propylene	NA
Propane	NA
Isobutane	NA
n-Butane	NA
Ethane	NA
Benzene	10 lb final RQ 4.54 kg final RQ
Hydrogen sulfide	100 lb final RQ 45.4 kg final RQ

**SARA:** The following EPA hazard categories apply to this product:

- Acute Health Hazard
- Fire Hazard
- Sudden Release Of Pressure

**SARA Section 313:** This product may contain component(s), which if in exceedance of the de minimis 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:
Propylene	1.0 % de minimis concentration
Propane	None
Isobutane	None
n-Butane	None
Ethane	None
Benzene	0.1 % de minimis concentration
Hydrogen sulfide	1.0 % de minimis concentration

**State and Community Right-To-Know Regulations:**

The following component(s) of this material are identified on the regulatory lists below:

**Propylene**

- Louisiana Right-To-Know: Not Listed.
- California Proposition 65: Not Listed.
- New Jersey Right-To-Know: SN 1609
- Pennsylvania Right-To-Know: Environmental hazard
- Massachusetts Right-To Know: Present
- Florida Substance List: Not Listed.
- Rhode Island Right-To-Know: Toxic; Flammable
- Michigan Critical Materials Register List: Not Listed.
- Massachusetts Extraordinarily Hazardous Substances: Not Listed.
- California - Regulated Carcinogens: Not Listed.
- Pennsylvania RTK - Special Hazardous Substances: Not Listed.
- New Jersey - Special Hazardous Substances: Flammable - fourth degree
- New Jersey - Environmental Hazardous Substances List: SN 1609 TPQ: 500 lb
- Illinois - Toxic Air Contaminants: Not Listed.
- New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed.

**Propane**

- Louisiana Right-To-Know: Not Listed.
- California Proposition 65: Not Listed.
- New Jersey Right-To-Know: SN 1594
- Pennsylvania Right-To-Know: Present
- Massachusetts Right-To Know: Present
- Florida Substance List: Not Listed.
- Rhode Island Right-To-Know: Toxic; Flammable
- Michigan Critical Materials Register List: Not Listed.
- Massachusetts Extraordinarily Hazardous Substances: Not Listed.

California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 1594 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.
<b>Isobutane</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 1040
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed.
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 1040 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.
<b>n-Butane</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 0273
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 0273 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.
<b>Ethane</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 0834
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Flammable - fourth degree

New Jersey - Environmental Hazardous Substances List: SN 0834 TPQ: 500 lb  
 Illinois - Toxic Air Contaminants: Not Listed.  
 New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed.

**Benzene**  
 Louisiana Right-To-Know: Not Listed.  
 California Proposition 65: Carcinogen, initial date 2/27/87  
 Developmental toxicity, initial date 12/26/97  
 Male reproductive toxicity, initial date 12/26/97  
 SN 0197

New Jersey Right-To-Know: Environmental hazard; Special hazardous substance  
 Pennsylvania Right-To-Know: Carcinogen; Extraordinarily hazardous  
 Massachusetts Right-To-Know: Carcinogen; Extraordinarily hazardous  
 Florida Substance List: Not Listed.  
 Rhode Island Right-To-Know: Toxic (skin); Flammable (skin); Carcinogen (skin)  
 Michigan Critical Materials Register List: 100 lb Annual usage threshold  
 Massachusetts Extraordinarily Hazardous Substances: Carcinogen; Extraordinarily hazardous  
 California - Regulated Carcinogens: Not Listed.  
 Pennsylvania RTK - Special Hazardous Substances: Present  
 New Jersey - Special Hazardous Substances: Carcinogen; Flammable - third degree; Mutagen  
 New Jersey - Environmental Hazardous Substances List: SN 0197 TPQ: 500 lb  
 Illinois - Toxic Air Contaminants: Present  
 New York - Reporting of Releases Part 597 - List of Hazardous Substances: 10 lb RQ (air); 1 lb RQ (land/water)

**Hydrogen sulfide**  
 Louisiana Right-To-Know: Not Listed.  
 California Proposition 65: Not Listed.  
 New Jersey Right-To-Know: SN 1017  
 Pennsylvania Right-To-Know: Environmental hazard  
 Massachusetts Right-To-Know: Extraordinarily hazardous  
 Florida Substance List: Not Listed.  
 Rhode Island Right-To-Know: Not Listed.  
 Michigan Critical Materials Register List: Not Listed.  
 Massachusetts Extraordinarily Hazardous Substances: Extraordinarily hazardous  
 California - Regulated Carcinogens: Not Listed.  
 Pennsylvania RTK - Special Hazardous Substances: Not Listed.  
 New Jersey - Special Hazardous Substances: Flammable - fourth degree  
 New Jersey - Environmental Hazardous Substances List: SN 1017 TPQ: 500 lb  
 Illinois - Toxic Air Contaminants: Not Listed.  
 New York - Reporting of Releases Part 597 - List of Hazardous Substances: 100 lb RQ (air); 100 lb RQ (land/water)

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

**Canadian Regulatory Information:** "This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations."

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Propylene	A,B1,D2B	1%
Propane	A,B1	1%
Isobutane	A,B1	1%
n-Butane	A,B1	1%
Ethane	A,B1	1%

Benzene	B2,D2A,D2B	0.1%
Hydrogen sulfide	A,B1,D1A,D2B	1%



NOTE: Not Applicable.

## 16. OTHER INFORMATION

Prepared By Toxicology and Product Safety  
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**Revision Note:**

**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.