



DANGER



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WARNING

Safety Data Sheet

MSDS ID NO: 006

Revision date: April 2014

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Petroleum gases, liquefied or Liquefied Petroleum Gases
Synonyms: Raw product, demethanized raw feed mixture, Y-grade, raw mix, field liquids, natural gas liquids (NGL)

Chemical family: Aliphatic hydrocarbon

Formula: Mixture

Producer: EnLink Midstream, L.P.
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Suite 100
Dallas, TX 75201
www.EnLink.com

Emergency Line 866-394-9839

Available 24 hours

CHEMTREC 800-424-9300

EnLink 214-953-9500

**Available during normal
business hours**

****Ask for Compliance
Dept****

Section 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This product is a colorless mixture of liquid and gaseous hydrocarbons shipped or transported under pressure. It is a volatile and extremely flammable liquid that may cause flash fires. Keep away from heat, sparks and open flame. Liquid can cause frost burns. This product contains benzene, which may cause cancer or be toxic to blood-forming organs. Aspiration (inadvertent suction) of liquid into the lungs can produce chemical pneumonia or even death. Liquid can cause frost burns. Large releases can create a flammable vapor cloud.

OSHA-GHS Hazard Statements (Warning Label)

DANGER — Extremely Flammable Gas (*category 1*)

DANGER — May cause cancer (*category 1*)

WARNING — May be harmful if inhaled (*category 5*)

WARNING — Contains gas under pressure; may explode if heated

Toxic to aquatic life (*acute category 2*)

Inhalation: Components of this product are anesthetic at high concentrations, producing dizziness, headaches, incoordination and narcosis; extremely high concentrations can cause asphyxiation and death by displacement of oxygen from the breathing atmosphere. At extremely high concentrations and excessive exposure conditions, some components of this product may produce cardiac sensitization. Aspiration (inadvertent suction) of liquid into the lungs can produce chemical pneumonia or even death. This product contains benzene, which may cause cancer or be toxic to blood-forming organs.

Ingestion: Ingestion not likely. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonitis, pulmonary edema/hemorrhage and even death.

Skin contact: Vapor is generally non-irritating to skin. Direct contact with liquefied product can cause "cold burn" or frostbite.

Eye contact: Vapor is generally non-irritating to eyes. Direct contact with liquefied product can cause "cold burn" or frostbite and eye damage.

Carcinogenic evaluation: The International Agency for Research on Cancer (IARC) has determined that there is limited evidence for the carcinogenicity of naphtha (light straight run and light catalytic cracked) in experimental animals.

Name	IARC carcinogens:	NTP carcinogens:	ACGIH carcinogens	OSHA — select carcinogens
Benzene 71-43-2	Supplement 7 (1987) Monograph 29 (1982)	Known human carcinogen listed	A1 – Confirmed human carcinogen	Present

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

NGL is a mixture of hydrocarbons that are separated and/or condensed from natural gas during collection, transport, gathering and transmission/distribution.

Material information:

Name	CAS No.	Weight %
Propane	74-98-6	12-30
Ethane	74-84-0	15-30
N-butane	106-97-8	15-40
Iso-butane	75-28-5	5-20
Iso-pentane	78-78-4	2-15
N-pentane	109-66-0	2-10
Carbon dioxide	124-38-9	0-1
Methane	74-82-8	0-2
Benzene	71-43-2	0-1
N-hexane	110-54-3	1-3
C6 hydrocarbons (mix)	N/A	0-10

Note: The above are represented in ranges as estimates. Due to sources, components of NGL may vary due to the variations produced by a natural product.

Section 4. FIRST AID MEASURES

Inhalation: Move exposed persons to fresh air. If the person is not breathing or breathing is irregular, provide artificial respiration or oxygen by trained personnel. Seek immediate medical attention.

Skin contact: Thaw area slowly with tepid water (not to exceed 105°F) for at least 15 minutes while removing contaminated clothing and shoes. Wrap the patient under blanket of insulation fabric. Do not rub area and consult treatment with a physician. Wash clothing, and clean shoes thoroughly before reuse.

Ingestion: Ingestion is considered unlikely. If accidentally swallowed, obtain immediate medical attention.

Eye contact: Check for and remove any contact lenses. Immediately consult physician after flushing eyes with tepid water for at least 15 minutes.

Section 5. FIREFIGHTING MEASURES

Suitable extinguishing media:

Small fires — Class B fire-extinguishing media including CO₂ or dry chemical can be used. Larger fires — water spray, fog. Use of extinguishers should be undertaken only by adequately trained personnel.

Specific hazards:

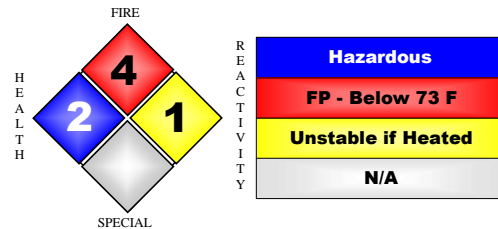
This product has been determined to be a flammable gas/liquid per the OSHA Hazard Communication Standard and should be handled accordingly. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA30 or the North American Emergency Response Guide 128. Bleve's point (boiling liquid expanding vapor explosions) can occur when a liquid in a pressurized container in close proximity to a fire reaches a temperature well above its boiling point. Its effect could lead to a catastrophic failure of the vessel, resulting in flying equipment fragments, a shock wave and a fireball, causing serious damage and death. 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 preferable to allow the flame to continue to burn. 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 (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep runoff water out of sewers and water sources.

Special protective equipment for firefighters

Firefighting may result in potential exposure to high heat, smoke or toxic byproducts of combustion. A self-contained breathing apparatus (SCBA) with full-face piece and full protective firefighting clothing should be worn.

NFPA rating:

Health: 2
 Flammability: 4
 Instability/reactivity: 1
 Other: N/A



Section 6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Evacuate any potentially affected area and isolate personnel from entry. Shut off source if possible and if safe. Use spark-proof tools and explosion-proof equipment. Ventilate the area if the spill is indoors. Isolate the area until gas has dispersed. Use suitable personal protective equipment (Section 8). Vapor can collect in lower areas. Advise applicable authorities if material has entered sewers or water courses.

Section 7. HANDLING AND STORAGE

Handling: Ensure proper grounding methods are used in the handling of this product. Comply with 29 CFR 1910.110, "Storage and Handling of Liquefied Petroleum Gases," and all other applicable guidelines and regulatory requirements related to environmental, health and safety. Product should never be used as a solvent due to its flammable and potentially toxic properties. Siphoning by mouth can result in lung aspiration, which can be harmful or fatal. Avoid skin contact. Exercise good personal hygiene, including removal of soiled clothing and prompt washing with soap and water.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering and 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 ignitions without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation. A buildup of static electricity can occur upon re-entry into a vehicle during fueling, especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (clothing or upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits:

Name	CAS No.	OSHA — PEL (ppm)	ACGIH® TLV® (ppm)	NIOSH — REL (ppm)
Propane	74-98-6	1000	1,000 ^A	1,000
Ethane	74-84-0	Not established	1,000 ^A	Not established
N-butane	106-97-8	Not established	1,000 ^A	Not established
Iso-butane	75-28-5	Not established	1,000 ^A	800
Iso-pentane	78-78-4	1000	600 (pentane/isomers)	120; 610 — STEL
N-pentane	109-66-0	1000	600	120; 610 — STEL
Carbon dioxide	124-38-9	5000	5,000 30,000 STEL	5,000 30,000 — STEL
Methane	74-82-8	Not established	1,000ppm TWA ^A	Not established
Benzene	71-43-2	1 5 — STEL	0.5 2.5 - STEL Skin — potential absorption	0.1 1 — STEL
N-hexane	110-54-3	500	50	50
C6 hydrocarbons (mix)	N/A	Not established	Not established	Not established

All exposure limits listed are 8-hour time weighted average (TWA) — except where noted otherwise.

Short-Term Exposure Limit (STEL) — a 15-minute TWA exposure period of time

^A Aliphatic hydrocarbon gas (alkane C₁-C₄)

Engineering measures: Ensure proper ventilation and methods of exhaust are operating to reduce potential hazards. Ensure all equipment is intrinsically safe or explosion-proof and approved for classified areas.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: MSHA/NIOSH-approved organic vapor chemical cartridge or supplied air respirators should be worn for exposures to any components exceeding the TLV or STEL. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for firefighting.

Skin and body protection: Wear insulated gloves to prevent skin contact and frostbite.

Eye protection: Ensure proper use of goggles and/or face shields in handling of any pressurized gases or materials.

Hygiene measures: Avoid repeated or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove contaminated clothing and launder before reuse.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless liquified gas
Physical state (solid/liquid/gas):	Gas
Substance type (pure/mixture):	Mixture
Color:	Clear
Odor:	Hydrocarbon
Molecular weight:	N/A
pH:	N/A
Boiling point/range (5-95%):	-127° to 257°F
Melting point/range:	Not determined
Decomposition temperature:	N/A
Specific gravity:	(H ₂ O = 1) 0.555
Vapor density:	(AIR = 1) 1.6/3.0
Vapor pressure:	30 to 250/PSIA at 100°F
Evaporation rate:	N/A
Flash point:	-211° to 55°F
Auto-ignition temperature:	N/A
Flammable limits in air — lower (%):	1%
Flammable limits in air — upper (%):	13%

Section 10. STABILITY AND REACTIVITY

Stability:	The material is stable at 70°F, 760 mm pressure.
Polymerization:	Will not occur.
Hazardous decomposition products:	Carbon monoxide, aldehydes
Materials to avoid:	Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine
Conditions to avoid:	Sources of heat or ignition

Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Product information (toxicological data does not exist for this mixture):

Name	CAS No.	Inhalation:	Dermal:	Oral:
Natural gas, raw liquid mix	64741-48-6	No data available	No data available	No data available
N-hexane	110-54-3	Rat LC ₅₀ 48,000ppm/4 hours	No data available	Rat LD ₅₀ 25,000 mg/kg
Benzene	71-43-2	Rat LC ₅₀ 10,000ppm/7 hrs	No data available	Human LD _{Lo} 50 mg/kg

Chronic toxicity:

This product contains benzene at a level of >0.1%. Repeated or prolonged exposure to benzene at concentrations in excess of the TLV may cause serious injury to blood-forming organs. Significant chronic exposure to benzene vapor has been reported to produce various blood disorders ranging from anemia to certain forms of leukemia (cancer) in humans. Benzene produced tumors in rats and mice in lifetime chronic toxicity studies, but the response has not been consistent across species, strain, sex or route of exposure. Animal studies on benzene have demonstrated immune toxicity, chromosomal aberrations, testicular effects and alterations in reproductive cycles and embryo/fetotoxicity, but not teratogenicity.

Summary of health effect information on the product: *refer to Hazard Section 2*

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity effects:

N-pentane:	EC ₅₀ daphnia: 2.3 mg/l 48 hrs
	LC ₅₀ fish: 3.1 mg/l 96 hrs
Hexanes:	LC ₅₀ fathead minnow: 2.1-2.9 mg/l 96 hrs

Not expected to be harmful to aquatic organisms. The product contains volatile organic compounds that have a photochemical ozone creation potential.

Section 13. DISPOSAL CONSIDERATIONS

Cleanup considerations: This product, as produced, is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of a "characteristic" hazardous waste. This product could also contain benzene at >0.5ppm and could exhibit the characteristics of "toxicity" as determined by the toxicity characteristics leaching procedure (TCLP). This material could become hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations. Bleeding off small amounts of this product into the atmosphere or controlled incineration of large amounts are potential disposal methods provided all regulatory requirements are met.

Section 14. TRANSPORT INFORMATION

Please refer to 49 CFR 172.101:

DOT:

Transport information:	This material when transported via U.S. commerce would be regulated by DOT regulations.
Proper shipping name:	Petroleum gases, liquefied or Liquefied Petroleum Gases
UN/identification no.:	UN 1075
Hazard class:	2.1
Packing group:	N/A
DOT reportable quantity (lbs):	

Section 15. REGULATORY INFORMATION

U.S. federal regulatory information:

State and community right-to-know regulations:

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

U.S. TSCA Chemical inventory Section 8(b)

OSHA — This product is determined to be hazardous as defined in the OSHA Hazard Communications Standard.

CERCLA Sections 102a/103 (40 FR 302.4):

SARA Title III Section 302 — N/A

SARA Title III Section 304 — N/A

SARA Title III Section 313 — N/A

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21)

ACUTE:	HEALTH HAZARD
CHRONIC:	HEALTH HAZARD
FIRE:	FIRE HAZARD
REACTIVE:	NO
SUDDEN RELEASE:	SUDDEN RELEASE OF PRESSURE

NOTE: User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

Section 16. OTHER INFORMATION

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, EnLink Midstream, L.P., and its related operations or divisions (EnLink) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. EnLink assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.