



**MATERIAL SAFETY DATA SHEET (MSDS)
NATURAL GAS LIQUIDS (N.G.L.'s)**

IDENTITY (As Used on Label and List) Natural Gas Liquids (DOT ID No: 1075)		(Hazard Rating: Health-0/Fire-4/Reactivity-0) DOT Hazard Classification: Flammable Liquid, 2.1		
Section I – Chemical Product and Company Identification				
Manufacturer's Name MARKWEST		Emergency Phone Number Markwest (800) 730-8388 / CHEMTREC (800) 424-9300		
Address (Number, Street, City, State and ZIP code) 1515 Arapahoe Street		Telephone Number for Information: (800) 730-8388		
Tower 1, Suite 1600		Date Prepared June 21, 2011		
Denver, Colorado 80202-2126		Signature of Preparer (optional) N/A		
Section II – Hazardous Ingredients/Identity Information				
Hazardous Components (Specific Chemical Identity; Common Name (s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Ethane (74-84-0)	None	None		0 to 5%
Propane (74-98-6)		1000 ppm		20-70%
Normal Butane (106-97-8)		800 ppm		15-25%
Isobutane (75-28-5)	800 ppm			5-15%
Pentanes (109-66-0)	1000 ppm	600 ppm		5-25%
Hexanes + (8006-61-9)	500 ppm			0-25%
Hydrogen Sulfide	10 ppm	20 ppm		0 to 0.055%
Section III – Physical/Chemical Characteristics				
Boiling Point -98° F to 90° F		Specific Gravity (H ₂ O = 1): 0.50 to 0.65		
Vapor Pressure (Reid): 30.0 to 90.0 psia at 100°F		Melting Point: Not determined		
Vapor Density (AIR = 1): 1.6 to 3.0		Evaporation Rate (Butyl Acetate = 1): Not determined		
Solubility in Water: Negligible (below 0.1%)				
Appearance and Odor: Gas and liquid. Clear to light brown color. Distinct hydrocarbon odor.				
Section IV – Fire and Explosion Hazard Data				
Flash Point (Method Used): -200° F to 10° F	Flammable Limits Flammable Compressed Gas, Flammable Liquid		LEL 1.0%	UEL 9.5%
Extinguishing Media: Water spray, fog or foam. Dry chemical can be used for small fires.				

Emergency and First Aid Procedures:

Eyes: Flush eyes with tepid water for at least 15 minutes and get immediate medical attention.

Skin: Remove contaminated clothing. Flush affected skin area with tepid water. Do NOT use hot water. Get immediate medical attention.

Swallowed: Drink plenty of water, if possible. Do NOT induce vomiting and get immediate medical attention.

Inhaled: Move victim to fresh air in uncontaminated area. Give artificial respiration if not breathing and give oxygen if breathing is difficult. Get immediate medical attention.

Section VII – Precautions for Safe Handling and Use

Steps to be taken in Case Material is Released or Spilled:

Remove or shut off all sources of ignition. Stop leak if this can be done without risk for tank car or truck, isolate area for ½ mile radius and keep people out of area. Use water spray or fog to disperse vapors. For small spills, wear respirator and after all vapors have been released, take up liquid that has pooled with sand or noncombustible absorbent. For large spills, wear respirator and after all vapors have been released, dyke liquid for containment.

Waste Disposal Method:

Small amounts of vapor – controlled venting to outside air, ensuring dissipation of gas is below the LEL. Large amounts of NGL's – controlled burning in government permitted air pollution control facilities.

Precautions to Be Taken in Handling and Storing:

Keep away from ignition sources. Store in approved containers, preferably outdoors, or in a well-ventilated area. Ground and bond all product lines and equipment. Observe specific handling and safety procedures for Flammable Compressed Gas and Hydrogen Sulfide.

Other Precautions:

Ventilate areas, which may contain vapors before entering. Vapors may collect in low areas.

Section VIII – Control Measures

Respiratory Protection (Specify Type):

Use with adequate ventilation and use hydrogen sulfide monitors. If ventilation is inadequate, use supplied air respirator.

Ventilation:	Local Exhaust Use explosion proof fans	Special
	Mechanical (General)	Other

Protective Gloves

Vinton gloves

Eye Protection

Chemical goggles

Other Protective Clothing or Equipment:

Impervious clothing and face shield

Work/Hygienic Practices

Avoid prolonged or continual exposure or contact. Control airborne concentrations below the exposure guidelines.

N/A – Not Applicable

N/D – Not Determined

~ -- Approximately

* -- Based on LP (Gas)