

MATERIAL SAFETY DATA SHEET - QPC

Section I, Material Identification			
NAME Natural Gas			
DESCRIPTION Fuel Gas Transported in Pipelines			
OTHER DESIGNATIONS Methane			
SUPPLIER Questar Pipeline Company P.O. Box 45360 180 East 100 South Salt Lake City, Utah 84145-0360			Date: 4/98 EMERGENCY PHONE (801) 324-5111
Section II, Ingredients and Hazards			Hazard Data
Compound*	Maximum	Minimum	Typical
Methane	92.8%	79.0%	87.3%
Ethane	10.3%	3.8%	7.1%
Propane	3.3%	0.4%	1.8%
Butanes +	1.2%	0.1%	0.7%
Nitrogen	8.7%	0.5%	2.2%
Carbon Dioxide	2.5%	0.2%	0.9%
Trace amounts of Hydrogen Sulfide and Water Vapor			
*These compounds are typical. They may vary slightly, depending upon the source or supplier providing natural gas to Questar Gas.			
Section III, Physical Data			
Boiling Point (°F)	Approx. -100	Specific Gravity (H ₂ O = 11)	N/A
Vapor Pressure (mm Hg)	N/A	Percent Volatile by Volume (%)	100%
Vapor Density (Air = 1)	0.610 to 0.690	Evaporation Rate (_____ = 1)	N/A
Solubility in Water	3x10 ⁻⁵ lb./lb.		
APPEARANCE AND ODOR Colorless, odorless, tasteless gas.			
Section IV, Fire and Explosion Data			
FLASHPOINT AND METHOD N/A	AUTOIGNITION TEMPERATURE 1100F - 1200F	FLAMMABILITY LIMITS IN AIR LEL: 5.0% UEL: 15.0%	
EXTINGUISHING MEDIA AND METHOD Flame can be extinguished with CO ₂ , dry chemical or halocarbon gas. A hazard of reignition or explosion exists if flame is extinguished without stopping flow of gas and/or cooling the surroundings and eliminating ignition source. Use water spray to cool surroundings and exposures.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			
Section V, Reactivity Data			
When suitably contained and kept unmixed with air or other oxidizing agents, natural gas is stable under normal storage and handling conditions. It does not polymerize. It readily forms flammable/explosive mixtures with air (see Section IV) in the presence of catalysts or sources of ignition. Violent or explosive reactions can occur between natural gas and oxidizing agents, such as chlorine, bromine pentafluoride, oxygen difluoride, and nitrogen trifluoride. It explodes spontaneously when mixed with chlorine dioxide.			

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Section VI, Ingredients and Hazards

INFORMATION

Natural gas is non-toxic. However, it can act as a simple asphyxiant by displacing or partially displacing the oxygen required to support life.

Victims exposed to oxygen-deficient atmospheres become cyanotic, experience diminished mental alertness and impaired muscular coordination, and dyspnea. Collapse and death can occur at very low oxygen levels.

FIRST AID AND EMERGENCY PROCEDURES

Inhalation: Remove victim to fresh air. Quickly restore and/or support breathing as required. Have trained person administer oxygen, if available. Keep victim quiet and maintain normal body temperature. (Mouth-to-mouth resuscitation should be used *immediately* for victim if breathing has stopped because of natural gas asphyxiation.) Obtain medical help.

Section VII, Spill, Leak, and Disposal Procedures

RELEASE OR SPILL PROCEDURES

WHEN GAS IS ESCAPING IN QUANTITY, evacuate and clear a safe area. Shut off gas supply. Extinguish all open flames, prohibit smoking, and make certain that electrical switches or other possible ignition sources are not operated. Ventilate enclosed areas by opening doors and windows. Call Questar Pipeline from a location away from escaping natural gas. **Minor leaks** can be detected with a soap solution applied at suspected leak points. **NEVER** use a flame to detect leaks. Eliminate ignition sources and ventilate area.

WASTE DISPOSAL METHOD

Natural gas is lighter than air and, unless trapped, will rise and dissipate rapidly into the atmosphere.

Section VIII, Special Protection Information

Provide adequate general and local exhaust ventilation (explosion-proof) to prevent workplace atmospheres from reaching 20% of lower explosive limit. Thoroughly test natural gas lines for leakage. Give special attention to ventilation for enclosed areas.

Provide air-supplied or self-contained breathing equipment for emergency or non-routine situations where natural gas level contributes to oxygen deficiency.

(The use of cartridge or cannister respirators may result in suffocation if used in an oxygen-deficient environment)

Section IX, Special Precautions and Comments

HANDLING AND STORAGE

Ground all lines and equipment used with natural gas to prevent static sparks. Use non-sparking tools. **NO SMOKING** where natural gas is used or stored.

OTHER PRECAUTIONS

Incompleted combustion of natural gas may create carbon monoxide as a waste product. Assure that natural gas appliances are properly adjusted, maintained and used to assure complete combustion of natural gas.