



Material Safety Data Sheet

Section 1: Identification

Manufacturer: Devon Energy 20 North Broadway Oklahoma City, OK 73126	Emergency Phone Number: 1.800.424-9300 CHEMTREC		
	Telephone Number for Information 405.235.3611		
Product Identification: Natural Gas(Sour)	Trade Name or Synonyms: Marsh Gas, Natural Gas, Sour Gas	Date of Issue: 9/25/01	Rev. Date 7/07/04

Section 2: Hazardous Ingredients

Name	Percent	OSHA PEL	ACGIH TLV
Methane (CAS No. 74-82-8)	70 – 85		Not established
Ethane (CAS No. 78-84-0)	4 – 9		Not established
Nitrogen (CAS No. 7727-37-9)	0 – 12		Not established
Propane (CAS No. 74-98-6)	3 – 8		0 – 1000 ppm
Butane (CAS No. 106-97-8)	LT 3		A/O – 800 ppm
Pentane (CAS No. 109-66-0)	LT 1		A/O – 600 ppm STEL – 750 ppm
Hexane (CAS No. 110-54-)	LT 2		A/O – 50 ppm
Hydrogen Sulfide (CAS No. 7783-06-04)	LT 5		A/O – 10 ppm STEL – 15 ppm

Section 3: Physical Data

Boiling Point (F°)	-258° F	Specific Gravity (water =1)	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	
Vapor Density (air=1)	0.6 Estimate	Evaporation Rate	N/A
Solubility in Water	Negligible		
Appearance / Odor	Colorless, Tasteless; Odor - Sulfur		

Section 4: Fire and Explosion Data

Flash Point	N/A (Gas)	Flammable Limits	LEL 3.8% UEL 17%
Extinguishing Media: Dry chemical, carbon dioxide, halon – Stop flow of gas from source to extinguish residual fires.			
Special Fire Fighting Procedures: If possible, shut off gas source and allow fire to burn itself out. Use water to cool equipment and surfaces exposed to fire. Responders must wear appropriate respiratory protection.			
Unusual Fire and Explosion Hazards: Readily forms flammable mixtures with air.			

Section 5: Health Hazard Data

Effects of Overexposure: No data available.	
Medical Conditions Generally Aggravated by Exposure Pre-existing chronic respiratory diseases.	
Skin Contact	Not expected to be absorbed through the skin. May cause slight irritation
Eyes	May cause slight irritation



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Inhalation	Acts primarily as an asphyxiant and creates an oxygen deficient atmosphere. (Note: An oxygen deficient atmosphere is defined by OSHA as an atmosphere with less than 19.5% oxygen.) H ₂ S concentrations in excess of 100 ppm may cause olfactory fatigue. An oxygen deficient atmosphere causes rapid breathing, headache, dizziness, visual disturbances, muscular weakness, tremors, narcosis, unconsciousness, and death, depending on concentration and duration of exposure. In addition, respiratory irritation and central nervous system depression may be caused by the presence of H ₂ S.
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Ingestion

None expected.

Emergency and First Aid Procedures:

Eye contact: Rinse immediately with water for a minimum of 15 minutes. If irritation or discomfort persists, seek medical attention.

Skin contact: Seek medical attention if symptoms or irritation occur.

Inhalation: Immediately move victim to fresh air. For respiratory distress, administer air, oxygen, or artificial respiration. Keep victim quiet and warm until medical care is obtained.

Ingestion: Seek medical attention if symptoms occur.

Section 6: Reactivity Data

Stability	Stable under normal conditions of storage and handling
Incompatibility	Incompatible with halogens or interhalogens. Reacts violently with oxidizers (e.g. bromine pentafluoride, chlorine, fluorine. Liquid oxygen, chlorine dioxide).
Conditions to Avoid	Very dangerous fire and explosion hazard when exposed to heat or flame. Mixtures with chlorine have produced explosions.
Hazardous Decomposition Products	Incomplete combustion may produce carbon monoxide and sulfur gases (SO _x).
Hazardous Polymerization	Will not occur.
Polymerization Conditions to Avoid	Not Available

Section 7: Spill or Leak Procedures

Steps to be taken in case material is released or spilled:

Eliminate all potential sources of ignition. Evacuate all non-essential personnel to an area upwind. Stop source of release. Ventilate enclosed areas to prevent formation of flammable or oxygen deficient atmospheres. Water spray may be used to reduce vapors. Avoid vapor cloud, even with proper respiratory protective equipment.

Waste Disposal Method (Insure conformity with local disposal regulation):

Releases are expected to cause only localized, non-persistent environmental damage. Waste mixtures containing these gases should not be allowed to enter drains or sewers where there is danger of their vapor being ignited. These gases may be used as an auxiliary fuel or disposed of by burning in a properly designed flare or incinerator.

Section 8: Personal Protection Information

Respiratory Protection	Under exposure conditions where oxygen content may be reduced to below 19.5% or H ₂ S concentrations in excess of OSHA PEL, use a self-contained breathing apparatus operated in pressure demand mode
Ventilation	Provide adequate ventilation to prevent accumulation of explosive mixture and to avoid oxygen deficient atmospheres.
Eye Protection	Use safety glasses, chemical goggles or face shield when handling the material..
Other Protective Clothing or Equipment	Avoid skin contact with gas. Use insulated or neoprene protective clothing. Use explosion proof equipment suitable for hazardous locations (as defined in the National Electric Code, NFPA 70).



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Work/Hygienic Practices

Use appropriate personal protective equipment to avoid direct contact.

Section 9: Special Precautions

Precautions to be taken in handling and storing:

Store and use gas containers only in well ventilated area. Storage areas should not exceed 100°F. and be protected from dampness, salt and corrosive chemicals.

This material may contain small amounts of RADON, a naturally occurring radioactive gas, and its particulate decay products, some of which may be retained in process equipment. Because of the short half-life of these decay products, they will decay to background levels within 4 hours after cessation of flow. Maintenance of equipment which may concentrate particulate matter (e.g. filtration systems) should therefore be delayed until at least 4 hours after gas flow has been stopped. If personnel cannot wait 4 hours to begin maintenance work, appropriate protective equipment, to prevent skin contamination or inhalation of airborne particulate matter, should be worn when working with the process equipment.