



## Material Safety Data Sheet

### Section 1: Identification

<b>Manufacturer:</b> Devon Energy 20 North Broadway Oklahoma City, OK 73126		<b>Emergency Phone Number:</b> 1.800.424-9300 CHEMTREC	
		Telephone Number for Information 405.235.3611	
<b>Product Identification:</b> "Wet" Natural Gas	<b>Trade Name or Synonyms:</b> Casing Head Gas, Well Head Gas	<b>Date of Issue:</b> 9/25/01	<b>Rev. Date</b> 7/07/04

### Section 2: Hazardous Ingredients

Hazardous Component	Percent	OSHA PEL /ACGIH TLV
*Methane	90+	Not Established
*Ethane		Not Established
*Propane		Not Established
*Helium		Not Established
*Butane		800 ppm ACGIH, 8 hr TWA
Carbon Dioxide	0 – 50	5000 ppm ACGIH, 8 hr TWA
Hydrogen Sulfide	0 – 5	10 ppm ACGIH, 8 hr TWA 15 ppm ACGIH STEL

\*These gases are simple asphyxiants, gases which act by diluting the available oxygen.

### Section 3: Physical Data

<b>Boiling Point (F°) @ 760 mm Hg.</b>	-259° F. to 100+° F. (individual components)	<b>Specific Gravity (water =1)</b>	N/A
<b>Vapor Pressure</b>	N/A	<b>Melting Point</b>	N/A
<b>Vapor Density (air=1)</b>	0.6	<b>Evaporation Rate (butyl Acetate = 1)</b>	N/A
<b>Solubility in Water</b>	Slightly		
<b>Appearance / Odor</b>	This material is a colorless gas and may have the odor of rotten eggs.		

### Section 4: Fire and Explosion Data

<b>Flash Point</b>	N/A (Gas)	<b>Flammable Limits</b>	LEL: 4% UEL: 14%
<b>Extinguishing Media:</b> Stop flow of gas. Extinguish surrounding fire only if gas flow can be stopped.			
<b>Special Fire Fighting Procedures:</b> The use of a self-contained breathing apparatus (SCBA) is recommended for fire fighters. Water spray may be useful in ventilating the exposed area and cooling storage vessels exposed to heat and flame.			
<b>Unusual Fire and Explosion Hazards:</b> This material may be ignited by heat, sparks, and flames. Storage pressure vessels may overpressure and finally rupture with destructive force.			

### Section 5: Health Hazard Data

<b>Health Hazards:</b> Natural gas is non-toxic; may act as a simple asphyxiant by displacing required air.	
<b>Skin Contact</b>	This gas is not a skin irritant. Note: See Skin Contact under Emergency and First Aid Procedures in this Section.
<b>Eyes</b>	A component of this gas is an eye irritant. Exposure can cause burning, redness and conjunctivitis.



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<b>Inhalation</b>	This material can be an asphyxiant and may exhibit anesthetic properties at very high concentrations. Initial symptoms of exposure at these concentrations are disorientation, lack of coordination, headache and nausea. Continued exposure may lead to unconsciousness, coma and death. This gas may contain toxic hydrogen sulfide which can cause irritation of the nose or throat, coughing, nosebleeds, visual disturbances, headache, nausea, dizziness, drowsiness and inflammation and accumulation of fluid in the lungs. Severe exposures can cause an immediate loss of consciousness, coma and death.
<b>Ingestion</b>	This material is a gas under normal atmospheric conditions and ingestion, therefore, is unlikely.
<b>Emergency and First Aid Procedures:</b>	
<b>Eye contact:</b> Move away from exposure to vapors and into fresh air. If irritation or redness develops, flush eyes with water and seek medical attention. For direct contact, flush the affected eye(s) with clean water for at least 15 minutes	
<b>Skin contact:</b> Treat burned or frostbitten skin by flushing or immersing affected area(s) in lukewarm water. After sensation has returned to the frostbitten skin, keep skin warm, dry and clean. If blistering occurs, apply sterile dressings. Seek immediate medical attention.	
<b>Inhalation:</b> Move victim away from exposure and into fresh air. If victim is having breathing difficulties, oxygen should be administered by a qualified person. Whenever the victim has stopped breathing, artificial respiration and oxygen should be administered by qualified personnel. Seek immediate medical attention. To Physician: This product may contain hydrogen sulfide (H <sub>2</sub> S). In high doses, H <sub>2</sub> S may produce pulmonary edema, respiratory depression or respiratory paralysis. The first priority in treatment should be to maintain adequate ventilation and administer oxygen. Nitrites provide a specific antidote. Give 10 ml of a 3% solution NaNO <sub>2</sub> (0.3 – 0.5 gm dissolved in 10-15 ml water) i.v. over 2-4 minutes. As in cyanide poisoning, dosage should be adjusted in children or in presence of anemia.	
<b>Ingestion:</b> Since this material is a gas under normal atmospheric conditions, no first aid is normally required.	

### Section 6: Reactivity Data

<b>Stability</b>	Stable
<b>Incompatibility</b>	N/A
<b>Conditions to Avoid</b>	N/A
<b>Hazardous Decomposition Products</b>	Combustion may yield sulfur dioxide, carbon monoxide and/or carbon dioxide.
<b>Hazardous Polymerization</b>	Will not occur.
<b>Polymerization Conditions to Avoid</b>	N/A

### Section 7: Spill or Leak Procedures

<b>Steps to Be Taken in Case Material is Released or Spilled</b>
Isolate hazard area and restrict entry. Stay upwind and away from release. Extremely flammable: keep all sources of ignition away from leak. Contact fire authorities and appropriate state/local agencies.
<b>Waste Disposal Method (Insure conformity with local disposal regulation):</b>
Allow to disperse in air.

### Section 8: Personal Protection Information

<b>Respiratory Protection</b>	Depending on toxic gas or natural gas concentration, respiratory protection will be required. Whenever oxygen content is below 19.5%, supplied air equipment must be used.
<b>Ventilation</b>	If current ventilation practices are not adequate in maintaining airborne concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required. Where explosive materials may be present, electrical systems safe for such location must be used.



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<b>Eye Protection</b>	None normally required.
<b>Protective Gloves</b>	None normally required.
<b>Other Protective Clothing or Equipment</b>	It is suggested that a source of clean water be available in the work area for flushing eyes and skin.

### Section 9: Special Precautions

Store in approved pressure vessels in a well-ventilated area away from heat, flame, sparks or other sources of ignition.

Avoid inhalation of vapors and personal contact with this material.