



UNODOURIZED Natural Gas Material Safety Data Sheet

Cette information existe également en français.

Health Hazard	1
Flammability	4
Reactivity	0

SECTION I: PRODUCT INFORMATION

Supplier MANITOBA HYDRO 360 Portage Avenue Winnipeg, Manitoba Canada R3C 0G8	WHMIS Classification Class A – Compressed Gas Class B – Div. 1 – Flammable Compressed Gas	Chemical Family Alkane Simple Hydrocarbons	TDG: Shipping Name Natural Gas, compressed (with high methane content)
Emergency Telephone Numbers (204) 480-5900 (in Winnipeg) 1-888-624-9376 (outside Winnipeg)	Trade Name Unodourized Natural Gas	Molecular Family CH ₄ (Methane)	UN/PIN: 1971
	Chemical Name Methane	Product Use Natural Gas is used primarily as a heating fuel for domestic and industrial purposes.	Class: 2.1
	Synonyms Natural Gas/Methane	Method of Transport Pipeline (under pressure)	

SECTION II: HAZARDOUS COMPONENTS

COMPONENT	CONCENTRATION %	CAS	PIN	LD ₅₀ / LC ₅₀ SPECIES AND ROUTE	EXPOSURE LIMIT
Methane	> 95.0%	74-82-8	UN 1971	Cat (inhalation) = 900,000 ppm (90% in air)	1000 ppm
Ethane	< 2.0%	74-84-0	UN 1035	N. Av.	1000 ppm
Nitrogen	< 2.0%	7727-37-9	UN 1066	N. Av.	Simple Asphyxiant
Other Hydrocarbons	< 0.5%			N. Av.	N. Av.

SECTION III: PHYSICAL DATA

Appearance and Odour Colourless; odourless	Freezing Point (as Methane) –183°C	Molecular Weight (Methane) 16.04	Vapor Density in Air (gaseous specific gravity) 0.53 to 0.7 (as Methane)
Odour Threshold Odourless	Vapor Pressure (mm of Mercury) Not Applicable	pH Value Not Applicable	Solubility in Water (as Methane) 0.0022% (Slight)
Boiling Point (as Methane) –162°C	Specific Gravity Not Applicable	Percent Volatile (by volume) 100%	

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flammability In presence of air/oxygen	Special Fire Fighting Procedures Control release by limiting or shutting off source utilizing pipeline/ control valves. Evacuate area. Keep upwind of fire.
Flammability Range (% by volume) 5.0% lower – 15.4% upper	Unusual Fire and Explosion Hazards Could be potentially hazardous if uncontrolled in a confined space. NOTE: Natural gas is lighter than air and will dissipate to atmosphere. A hazard from re-ignition or explosion exists if the flame is extinguished without stopping flow of natural gas and/or cooling surroundings and eliminating ignition source. (Use water spray to cool surroundings and exposures.)
Flashpoint –188°C TCC	
Fire Extinguishing Media Dry chemical, carbon dioxide (CO ₂), foam, water fog or Halon	
Auto Ignition Temperature 537°C	

SECTION V: HEALTH HAZARD DATA**Effects of Short Term (Acute) Exposure****Inhalation**

At high concentrations natural gas acts as an asphyxiant by displacing oxygen in the air.

Displacement of air by natural gas may lead to shortness of breath, unconsciousness and death from lack of oxygen. Incomplete combustion may produce carbon monoxide.

Methane may cause narcosis above 300,000 ppm (30% in air).

Eye Contact

Natural gas does not irritate the eyes

Skin Contact

Natural gas is not a skin irritant, may cause frostbite on skin contact.

Ingestion

Not applicable

Effects of Long Term (Chronic) Exposure**Carcinogenicity**

Not expected based on composition.

Reproduction

Not expected based on composition.

Mutagenicity

Not mutagenic by Ames Test with or without metabolic activation.

SECTION VI: REACTIVITY DATA**Stability**

Natural gas/methane is stable.

Conditions to Avoid

Uncontrolled explosive mixtures, open flame, spark source and static discharge.

Natural gas readily mixes with air when released and creates a combustible atmosphere (particularly in confined areas).

Incompatibility

Strong oxidizing agents (e.g. peroxides, perchlorates) as well as halogen compounds (e.g. chlorine) can increase the risk of fire and explosion.

Hazardous Polymerization

Will not occur

Hazardous Decomposition Products

Oxides of carbon and trace amounts of oxides of sulphur and nitrogen (SO_x and NO_x).

SECTION VII: FIRST AID MEASURES**Inhalation**

Move victim(s) into fresh air. Restore and/or support breathing as necessary. Oxygen may be beneficial. Obtain medical assistance. If heart has stopped, perform C.P.R.

SECTION VIII: SPILL OR LEAK PROCEDURES**Steps to be Taken in Case Gas Leak/Line Break Occurs**

Shut off source of natural gas supply, evacuate area, eliminate ignition sources, ventilate closed spaces.

Minor leaks can be detected with a soap solution applied at suspected leak points.

Emergency Telephone Numbers

(204) 480-5900 (in Winnipeg)

1-888-624-9376 (outside Winnipeg)

NEVER USE AN OPEN FLAME TO DETECT LEAKS.

SECTION IX: PREVENTATIVE MEASURES**Engineering Controls**

May be required to reduce hazardous exposures, e.g. explosion proof mechanical ventilation and lighting, process or personal enclosure, control of process conditions and process modification.

Handling and Storing Precautions

Avoid personal body contact (skin/eye contact, etc.) with high pressure natural gas. Avoid all possible sources of accidental ignition, e.g. static electricity, mechanical impact and other explosive sources. **Do not operate electrical switches.**

Respiratory Protection (specify type)**DO NOT USE AIR PURIFYING RESPIRATORS.**

Positive pressure, self contained breathing apparatus for emergency use. Adequate ventilation required. Adequate venting of possible combustion products required.

Other Protective Equipment

CSA/ASA Safety Equipment must be available/worn as required to protect ears, eyes, feet, hands, head and remaining body area.

SECTION X: PREPARATION INFORMATION**Prepared By**

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