



PREFERRED CHEMICAL NAME:		METHANE		CAS #:	74-82-8
Molecular Wt.	16.04	Molecular Formula:	CH ₄	Structural Molecular Formula:	CH ₄
Alternate Chemical Names:		NA			
DOT UN # :	1971 (compressed gas) 1972 (refrigerated liquid)	RTECS # :	PA1490000	NFPA 704: H-F-R-Special Hazard:	1 – 4 – 0
Physical State - Description:		Colorless Gas; Odorless Odor Threshold: 200 ppm			

PHYSICAL DATA					
Property	Value	Source	Property	Value	Source
Melting – Freezing Point:	-296.45°F (-182.47°C) @ 14.969 psia	GPSA	Boiling Point:	-258.74°F (-161.52°C) @ 14.696 psia	GPSA
Critical Temperature:	-116.68°F (-82.6°C)	GPSA	Critical Pressure:	667.8 psia	GPSA
Autoignition Temperature:	999°F (537°C)	GENIUM	Flash Point:	-366°F (-221°C)	PHYS
Lower Flammability Limit:	5.0%	GPSA	Upper Flammability Limit:	15.0%	GPSA
Vapor Pressure:	2 atm @ -242.1°F (-152.3°C)	GENIUM	Vapor Specific Gravity	0.5539	GPSA
Vapor Pressure (estimated):	5000 psia @ 100°F (38°C)	GPSA	(air = 1):		
Liquid Density (weight in vacuum, estimated, apparent value):	2.5 lb/gal @ 14.696 psia @ 60°F (16°C)	GPSA	Vapor Density:	0.04 lb/cu. ft. @ 14.696 psia @ 60°F (16°C)	GPSA
Liquid Specific Gravity (water = 1, estimated, apparent value):	0.3 @ 60°F/60°F (16°C/16°C)	GPSA	Conversion:	1 ppm = 0.656 mg/m ³ 1 ppm = 0.00066 mg/l	CCOHS*

HAZARD OVERVIEWS		
Hazard	Overview	Source
HEALTH	Irritating to skin/respiratory tract. Also Causes: frostbite. A simple asphyxiant which can displace available oxygen needed for breathing.	GENIUM
FIRE	Flammable. Can form explosive mixtures in the air. Extinguish methane fires by shutting off the source of the gas. Use water sprays to cool fire-exposed containers. Treat any fire situation involving rapidly escaping and burning methane gas as an emergency. Use water sprays to cool fire-exposed containers and to protect the personnel attempting to seal the source of the escaping gas.	GENIUM
REACTIVITY	Stable. Hazardous polymerization cannot occur. Avoid: ignition sources (open flames; lighted cigarettes or pipes; uninsulated heating elements; electrical or mechanical sparks); accidental or uncontrollably rapid release from high-pressure cylinders, tank cars, or pipelines. Incompatible with: bromine pentafluoride; chlorine; chlorine dioxide; nitrogen trifluoride; liquid oxygen; oxygen difluoride. Hazardous decomposition products: carbon dioxide; carbon monoxide.	GENIUM
SPECIAL HAZARD	None.	GENIUM

TOXICITY/EXPOSURE INFORMATION					
Data Term	Toxic Limit Value	Source	Data Term	Toxic Limit Value	Source
ERPG-1 :	None Listed	AIHA	TLV TWA :	1000 ppm	ACGIH
ERPG-2 :	None Listed	AIHA	TLV STEL :	None Listed	ACGIH
ERPG-3 :	None Listed	AIHA	PEL TWA:	None Listed	OSHA
IDLH :	None Listed	NIOSH	PEL STEL:	None Listed	OSHA



TOXICITY/EXPOSURE INFORMATION (continued)					
Classification	10 Min Exposure	30 Min Exposure	1 Hour Exposure	4 Hour Exposure	8 Hour Exposure
AEGL-1 :	None Listed	None Listed	None Listed	None Listed	None Listed
AEGL-2 :	None Listed	None Listed	None Listed	None Listed	None Listed
AEGL-3 :	None Listed	None Listed	None Listed	None Listed	None Listed

LISTING OF SUBSTANCE ON PERTINENT SAFETY/ENVIRONMENTAL PROGRAMS						
Y/N	Program	Statute	Regulation	Limits or Values		
N	EPCRA EHS	Section 302 of SARA Title III Emergency Planning	40 CFR Part 355	TPQ:		
				RQ:		
N	CERCLA	Section 304 of SARA Title III Emergency Notification	40 CFR Part 302	RQ:		
N	EPCRA Section 313	Section 313 of SARA Title III Toxic Release Inventory Reporting	40 CFR Part 372			
Y	RMP	Section 112(r) of CAAA 1990 Risk Management Plan	40 CFR Part 68	TQ:	10,000	lbs
Y	PSM	Section 304 of CAAA 1990 Process Safety Management	29 CFR Part 1910.119	TQ:	10,000	lbs
Y	NDEP-CAPP	Nevada Revised Statutes 459.3816 Chemical Accident Prevention Program	NAC 459.9533	TQ:	10,000	lbs

*See Conversions Page