



# Methane

## Description

Formula: CH<sub>4</sub>

## Gas Data

Molecular Weight: 16.04  
 Density: 0.676 kg/m<sup>3</sup> @ 21.1°C, 101.325 kPa  
 0.0422 lb/ft<sup>3</sup> @ 70°F, 14.696 psia  
 Specific Volume: 1.48 m<sup>3</sup>/kg @ 21.1°C, 101.325 kPa  
 23.7 ft<sup>3</sup>/lb @ 70°F, 14.696 psia

## Safety Information

LFL in Air: 5%  
 UFL in Air: 15%

## Shipping Information

CAS Registry Number: 74-82-8  
 UN Number: UN 1971  
 ECCN Number: 1C983  
 DOT Proper Shipping Name: Methane, Compressed  
 DOT Classification: 2.1 (Flammable Gas)  
 DOT Label: FLAMMABLE GAS  
 TC Shipping Name: Methane, Compressed  
 TC Classification: 2.1  
 TC Label: FLAMMABLE GAS

## Cylinder Specifications

Cylinder Size	Valve Outlet CGA No.	Pressure* psig @ 70°F	Pressure kPa @ 21.1°C	Approximate Ship Weight	
				lb	kg
1L	350	2,265	15,616	162	73
1A	350	2,265	15,616	144	65
2	350	2,000	13,790	78	35
3	350	2,000	13,790	41	19
4	350	2,000	13,790	25	12
6	350	1,585	10,928	20	9
7	350	1,585	10,928	20	9
LB	170	1,775	12,238	6	3

\*Real gas pressure

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	Page No.
<b>Methane, Research Purity 99.999%</b>	G2271112	1L	325 ft <sup>3</sup>	9.20 m <sup>3</sup>	Dual Stage Reg.	Series 3810-350	318
<i>Guaranteed Specifications</i>	G2271101	1A	286 ft <sup>3</sup>	8.10 m <sup>3</sup>	Single Stage Reg.	Series 3610A-350	316
Carbon Dioxide < 2 ppm	G2271140	2	100 ft <sup>3</sup>	2.83 m <sup>3</sup>	LB Regulator	Series 3570-170	314
Carbon Monoxide < 1 ppm	G2271150	3	40 ft <sup>3</sup>	1.13 m <sup>3</sup>	Cross Purge	4774-350	422
Ethane < 3 ppm	G2271165	4	13 ft <sup>3</sup>	0.37 m <sup>3</sup>	Flash Arrestor	6104A	434
Ethylene < 1 ppm	G2271178	6	4.41 ft <sup>3</sup>	125 L	Personal Monitor	IQ250	398
Hydrogen < 1 ppm	G2271181	7	2.12 ft <sup>3</sup>	60 L	Leak Detector	8066	406
Nitrogen < 4 ppm							
Oxygen < 1 ppm							
Propane < 1 ppm							
Propylene < 1 ppm							
Water < 1 ppm							
<i>A Certificate of Analysis is available on request at a nominal charge.</i>							
<b>Methane, Matheson Purity 99.99%</b>	G1861112	1L	325 ft <sup>3</sup>	9.20 m <sup>3</sup>	Dual Stage Reg.	Series 3120-350	299
<i>Guaranteed Specifications</i>	G1861101	1A	286 ft <sup>3</sup>	8.10 m <sup>3</sup>	Single Stage Reg.	Series 3530-350	313
Carbon Dioxide < 3 ppm	G1861140	2	100 ft <sup>3</sup>	2.83 m <sup>3</sup>	LB Regulator	Series 3550-170	314
Carbon Monoxide < 1 ppm	G1861150	3	40 ft <sup>3</sup>	1.13 m <sup>3</sup>	Tee Purge	4753-350	423
Ethane < 20 ppm	G1861165	4	13 ft <sup>3</sup>	0.37 m <sup>3</sup>	Flash Arrestor	6103A-F	434
Ethylene < 1 ppm					Personal Monitor	IQ250	398
Hydrogen < 1 ppm					Leak Detector	8066	406
Nitrogen < 60 ppm							
Oxygen < 10 ppm							
Propane < 1 ppm							
Propylene < 1 ppm							
Water < 3 ppm							
<i>A Certificate of Analysis is available on request at a nominal charge.</i>							
<b>Methane, Ultra High Purity 99.97%</b>	G1949112	1L	325 ft <sup>3</sup>	9.20 m <sup>3</sup>	Dual Stage Reg.	Series 3120-350	299
<i>Guaranteed Specifications</i>	G1949101	1A	286 ft <sup>3</sup>	8.10 m <sup>3</sup>	Single Stage Reg.	Series 3530-350	313
Carbon Dioxide < 5 ppm	G1949140	2	100 ft <sup>3</sup>	2.83 m <sup>3</sup>	LB Regulator	Series 3550-170	314
Carbon Monoxide < 5 ppm	G1949150	3	40 ft <sup>3</sup>	1.13 m <sup>3</sup>	Tee Purge	4753-350	423
Ethane < 50 ppm	G1949165	4	13 ft <sup>3</sup>	0.37 m <sup>3</sup>	Flash Arrestor	6103A-F	434
Ethylene < 5 ppm	G1949175	LB	2 ft <sup>3</sup>	56 L	Personal Monitor	IQ250	398
Hydrogen < 10 ppm					Leak Detector	8066	406
Nitrogen < 75 ppm							
Oxygen < 10 ppm							
Propane < 1 ppm							
Propylene < 1 ppm							
Water < 5 ppm							
<i>A lot analysis is available on request. Please inquire for individual cylinder analysis.</i>							

**Methane** (continued)

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	Page No.
<b>Methane, CP Grade 99.0%</b>	G1373312	1L	325 ft <sup>3</sup>	9.20 m <sup>3</sup>	Dual Stage Reg.	Series 1250-350	296
	G1373301	1A	286 ft <sup>3</sup>	8.10 m <sup>3</sup>	Single Stage Reg.	Series 3530-350	313
	G1373340	2	100 ft <sup>3</sup>	2.83 m <sup>3</sup>	LB Regulator	Series 3550-170	314
	G1373350	3	40 ft <sup>3</sup>	1.13 m <sup>3</sup>	Tee Purge	4753-350	423
	G1373375	LB	2 ft <sup>3</sup>	56 L	Flash Arrestor	6103A-F	434
					Personal Monitor	IQ250	398
					Leak Detector	8066	406
<i>A Certificate of Conformance will be provided on request.</i>							
<b>Methane, Technical Purity 98%</b>	G1373112	1L	325 ft <sup>3</sup>	9.20 m <sup>3</sup>	Dual Stage Reg.	Series 81-350	293
	G1373101	1A	286 ft <sup>3</sup>	8.10 m <sup>3</sup>	Single Stage Reg.	Series 18-350	292
	G1373140	2	100 ft <sup>3</sup>	2.83 m <sup>3</sup>	LB Regulator	Series 3320-170	302
	G1373150	3	40 ft <sup>3</sup>	1.13 m <sup>3</sup>	Tee Purge	4753-350	423
	G1373175	LB	2 ft <sup>3</sup>	56 L	Flash Arrestor	6103A-F	434
					Personal Monitor	IQ250	398
					Leak Detector	8066	406
<i>A Certificate of Conformance will be provided on request.</i>							
<b>Methane, Commercial Grade (Natural Gas) 93%</b>	G1373212	1L	325 ft <sup>3</sup>	9.20 m <sup>3</sup>	Dual Stage Reg.	Series 81-350	293
	G1373201	1A	286 ft <sup>3</sup>	8.10 m <sup>3</sup>	Single Stage Reg.	Series 18-350	292
					Tee Purge	4753-350	423
					Flash Arrestor	6103A-F	434
					Personal Monitor	IQ250	398
					Leak Detector	8066	406
<i>A Certificate of Conformance will be provided on request.</i>							
<b>Methane, Commercial, Odorized w/Methylmercaptan 93%</b>	G1373501A	1R	172 ft <sup>3</sup>	4.87 m <sup>3</sup>	Dual Stage Reg.	Series 81-350	293
					Single Stage Reg.	Series 18-350	292
					Tee Purge	4753-350	423
					Flash Arrestor	6103A-F	434
					Personal Monitor	IQ250	398
					Leak Detector	8066	406
<i>A Certificate of Conformance will be provided on request.</i>							