

**Marking**

CAS

Characterization acc. ADR

74-82-8  
UN 1971 METHANE,  
COMPRESSED or NATURAL  
GAS, COMPRESSED with high  
methanecontent, 2.1, (B/D)

Cylinder Marking



Shoulder color: red

**Essential properties**

compressed gas, lighter than air, colorless, odorless, flammable

Symbols of risks

**Physical Properties**

molecular weight	16,043 kg/kmol
gas density at 0°C and 1,013 bar	0,7175 kg/m <sup>3</sup>
density ratio to air	0,5549

For additional safety information see safety data sheet \*-CH4-078A

**Valves / Manifolds**

Valve connection

acc. to national regulations

Recommended Manifolds

Spectrolab FM 51 / FM 52exact



Specification / receptacles						
		Methane 2.5	Methane 3.5	Methane 4.5	Methane 5.5	
<b>Composition</b>						
CH <sub>4</sub>	≥	99.5	99.95	99.995	99.9995	Vol.-%
<b>Impurities</b>						
CO <sub>2</sub>	≤	500	10	1	0.1	ppmv
O <sub>2</sub>	≤	100	10	5	0.5	ppmv
N <sub>2</sub>	≤	500	200	15	2	ppmv
other HC	≤	2,000	250	20	0.15	ppmv
H <sub>2</sub> O	≤	10	5	5	2	ppmv
<b>Cylinder / Contents</b>						
F 10 200 bar		2.5	-	2.5	2.5	m <sup>3</sup>
F 50 200 bar		12.5	12.5	12.5	12.5	m <sup>3</sup>
F 50*12 200 bar		150.4	-	-	-	m <sup>3</sup>

**Remarks**

Testgas for natural gas burner  
Calibration gas for gas calorimeters  
Filling gas for Counter tubes for measurement of radioactive Radiation  
Calibration gas in mass spectrometry

Contents in m<sup>3</sup> at 15°C, 1 bar

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**Description**

Colourless odorless, highly flammable gas. Forms explosive atmospheres in air. Reacts explosively with nitrous oxide, nitrogen dioxide, fluorine and chlorine.

**Materials**

Cylinders and Valves: any usual materials  
 Seals: PTFE, PCTFE, PVDF, PA, PP, NBR, CR, FKM

Physical Properties			
molecular weight	16,043 kg/kmol	vapour pressure at 20°C	
critical point		gas density at 0°C and 1,013 bar	0,7175 kg/m <sup>3</sup>
temperature	190,555 K	density ratio to air	0,5549
Pressure	45,99 bar	gas density at 15°C and 1 bar	0,6709 kg/m <sup>3</sup>
density	0,162826 kg/l	conversion factor	
triple point		liquid at Ts to m <sup>3</sup> gas (15°C, 1 bar)	
temperature	90,68 K	virial coefficient	
Pressure	0,1174 bar	Bn at 0°C	-2,37*10 <sup>-3</sup> bar <sup>-1</sup>
boiling point		B30 at 30°C	-1,63*10 <sup>-3</sup> bar <sup>-1</sup>
temperature	111,63 K; -162 °C	gaseous state at 25°C and 1 bar	
liquid density	0,4226 kg/l	specific heat capacity cp	2,232 kJ/kg K
evaporation heat	510,3 kJ/kg	thermal conductivity	338,9*10 <sup>-4</sup> W/m K
		dynam. viscosity	11,2*10 <sup>-6</sup> Ns/m <sup>2</sup>