

Marking

CAS-Number 74-82-8

Characterization acc. ADR UN 1971, Methane, 2.1
Class 2, 1F

Cylinder Marking

shoulder:
red

Essential properties

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

Symbols of Risks

flammable



gas, compressed

Physical Properties

molecular weight: 16,043 kg/kmol
 gas density at 0°C and 1,013 bar: 0,7175 kg/m³
 density ratio to air: 0,5549

For additional safety information see Material-/safety data sheet No. *-CH4-078A

Valves / Manifolds

Valve connection acc. to national standards

Recommended Manifolds Spectrolab FM 51/FM 52exact

**Specifications / Forms of delivery**

		2.5	3.5	4.5	5.5	
Composition						
CH ₄	>	99,5	99,95	99,995	99,9995	Vol.-%
Impurities						
O ₂	<	100	10	5	0,5	ppmv
N ₂	<	500	200	15	2	ppmv
H ₂ O	<	10	5	5	2	ppmv
other HC	<	2000	250	20	0,15	ppmv
CO ₂	<	500	10	1	0,1	ppmv
Cylinders / Contents						
F 10 200 bar		2,5	2,5	2,5	2,5	m ³
F 50 200 bar		12,5	12,5	12,5	12,5	m ³
B 12* F 50 200 bar		150,4	-	-	-	m ³

Remarks

Applications:
 Fuel for power generation in gas turbines and steam boilers
 Fuel for household cooking and heating
 Fuel for vehicles (compressed natural gas, CNG)
 Feedstock of choice for production of hydrogen, carbon monoxide, methanol, acetic acid and a lot of organic compounds

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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.

detection Detector for flammable gases

Safety data

Explosion Range 4,4 - 17 Vol. %
Ignition Temperature 595 °C

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 ³
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 ³
density	0,162826 kg/l	Conversion Factor	
Triple Point		liquid at Ts to m ³ gas (15°C, 1 bar)	
temperature	90,68 K	Virial Coefficient	
Pressure	0,1174 bar	Bn at 0°C	-2,37*10 ⁻³ bar ⁻¹
Boiling Point		B30 at 30°C	-1,63*10 ⁻³ bar ⁻¹
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 ⁻⁴ W/m K
		dynam. viscosity	11,2*10 ⁻⁶ Ns/m ²