

Marking

CAS-Number	74-85-1
Characterization acc. ADR	UN 1962, Ethylene, 2.1 Classe 2, 2F

Cylinder Marking



shoulder:
red

Essential properties

Colourless, flammable gas with slightly sweet odor, liquified, lighter than air

Symbols of Risks



flammable



warning



gas, liquified

Physical Properties

molecular weight:	28,054 kg/kmol
gas density at 0°C and 1,013 bar:	1,2611 kg/m ³
density ratio to air:	0,9754

For additional safety information see Material-/safety data sheet No. *-C2H4-055A

Valves / Manifolds

Valve connection	acc. to national standards
Recommended Manifolds	Spectrolab FM 61 / FM 62



Specifications / Forms of delivery

		3.0	3.5	4.5	
Composition					
C ₂ H ₄	>	99,9	99,95	99,995	Vol.-%
Impurities					
O ₂	<	-	10	2	ppmv
N ₂	<	-	50	5	ppmv
H ₂ O	<	-	10	5	ppmv
C ₂ H ₆	<	500	-	20	ppmv
other HC	<	-	-	20	ppmv
CH ₄ + C ₂ H ₆	<	1100	-	-	ppmv
CO ₂	<	-	-	5	ppmv
Cylinders / Contents					
F 10		3,7	3,7	3,7	kg
F 50		18,5	18,5	16,0	kg

Remarks

Applications:
Precursor for plastics (polyethylene, polyvinylchloride, polystyrene, polyurethanes)
Active component in plant and fruit ripening gas (banana gas)

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Description

Colourless, highly flammable, liquified gas with slightly sweet odor. Forms explosive mixtures in air. Violent reactions with hydrogen bromide, hydrogen chloride, chlorine, nitrous oxide and nitrogen dioxide. Numerous reactions of addition or polymerisation due to the reactive double bond of the molecule.

detection Detector for flammable gases

Safety data

Explosion Range	2,4 - 32,6 Vol. %
Ignition Temperature	440 °C

Materials

Cylinders and Valves: any usual materials
Seals: PTFE, PCTFE, PVDF, PA, PP, IIR

Physical Properties			
molecular weight	28,054 kg/kmol	vapour pressure at 20°C	
Critical Point		gas density at 0°C and 1,013 bar	1,2611 kg/m ³
temperature	282,343 K	density ratio to air	0,9754
Pressure	50,404 bar	gas density at 15°C and 1 bar	1,178 kg/m ³
density	0,215 kg/l	Conversion Factor	
Triple Point		liquid at Ts to m ³ gas (15°C, 1 bar)	0,482
temperature	103,986 K	Virial Coefficient	
Pressure	0,0012 bar	Bn at 0°C	-7,43*10 ⁻³ bar ⁻¹
Boiling Point		B30 at 30°C	-5,39*10 ⁻³ bar ⁻¹
temperature	169,41 K, -100,4 °C	Gaseous State at 25°C and 1 bar	
liquid density	0,5679 kg/l	specific heat capacity cp	1,538 kJ/kg K
evaporation heat	482,6 kJ/kg	thermal conductivity	208*10 ⁻⁴ W/m K
		dynam. viscosity	10,4*10 ⁻⁶ Ns/m ²