

**Marking****CAS-Number**

124-38-9

**Characterization acc. ADR**UN 1013, Carbon dioxide, 2.2  
Class 2, 2 A**Cylinder Marking**shoulder:  
grey**Essential properties**

Colourless, odorless, asphyxiating gas, liquefied, heavier than air

**Symbols of Risks**

gas, compressed

**Physical Properties**

molecular weight:	44,0098 kg/kmol
gas density at 0°C and 1,013 bar:	1,9767 kg/m <sup>3</sup>
density ratio to air:	1,5289
vapour pressure at 20°C:	57,258 bar

For additional safety information see Material-/safety data sheet No. 018 A (Kohlendioxid)

**Valves / Manifolds****Valve connection**DIN 477 Nr. 6: W 21,8 x 1/14"  
Valve with bursting disc**Recommended Manifolds**

Spectrotec

**Specifications / Cylinders**

		technical	
<b>Composition</b>			
CO <sub>2</sub>	>	99,5	Vol.-%
<b>Impurities*</b>			
H <sub>2</sub> O	<	500	ppmw
residual gases	<	0,5	Vol.-%
<b>Cylinders / Contents</b>			
F 6,7		5,0	kg
F 10		7,5	kg
F 13,4		10,0	kg
F 27		20,0	kg
F 50		37,5	kg
Bdl 12 * F 50		450,0	kg

**Remarks**

Cylinders with and without dip tube available

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**Description**

Colourless, liquefied gas with slightly sourish smelling resp. taste. During expansion the carbondioxide can be cooled down below sublimation temperature. This results in CO<sub>2</sub>-snow(dry ice).

**detection**

test tubes

**Safety data**

TLV

5000 ml/m<sup>3</sup>**Materials**

Cylinders and Valves: any usual materials  
In the presence of humidity danger of corrosion of steel  
Seals: PTFE, PCTFE, PVDF, PA, PP

**Physical Properties**

<b>molecular weight</b>	44,0098 kg/kmol	<b>vapour pressure at 20°C</b>	57,258 bar
<b>Critical Point</b>		<b>gas density at 0°C and 1,013 bar</b>	1,9767 kg/m <sup>3</sup>
temperature	304,21 K	<b>density ratio to air</b>	1,5289
Pressure	73,825 bar	<b>gas density at 15°C and 1 bar</b>	1,8474 kg/m <sup>3</sup>
density	0,466 kg/l	<b>Conversion Factor</b>	
<b>Triple Point</b>		liquid at Ts to m <sup>3</sup> gas (15°C, 1 bar)	
temperature	216,58 K	<b>Virial Coefficient</b>	
Pressure	5,185 bar	Bn at 0°C	-6,64*10 <sup>-3</sup> bar <sup>-1</sup>
<b>Boiling Point</b>		B30 at 30°C	-4,78*10 <sup>-3</sup> bar <sup>-1</sup>
temperature	194,674 K; -78,5 °C	<b>Gaseous State at 25°C and 1 bar</b>	
liquid density	(sublimation point)	specific heat capacity cp	0,8504 kJ/kg K
evaporation heat	573,02 kJ/kg	thermal conductivity	164*10 <sup>-4</sup> W/m K
		dynam. viscosity	14,833*10 <sup>-6</sup> Ns/m <sup>2</sup>