Carbon dioxide CO_2

PURE GASES

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, liquified, 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/m³
density ratio to air:	1,5289
vapour pressure at 20°C:	57,258 bar

For additional safety information see Material-/safety data sheet No. *-CO2-018A

Valves / Manifolds

Valve connection acc. to national standards
liquid withdrawal trough dip tube for any
SFC/SFE-products

Recommended Manifolds Spectrolab FM 51 / FM 52exact
Spectrocem FE 51 / FE 52exact
For SFC/SFE-products: withdrawal
fittings (without pressure reduction)

Specifications / Cylinders		4.5	4.8	5.5 SFC/SFE	5.5 SFC/SFE with He-pressure head space	
Composition						
CO_2	>	99,995	99,998	99,9995	99,9995 (125 bar He-pressure head space)	Vol.-%
Impurities*						
H_2O	<	5	3	-	-	ppmv
O_2	<	10	2	1	1	ppmv
N_2	<	25	8	2	2	ppmv
THC (as CH_4)	<	1	1	0,5	0,5	ppmv
CO	<	1	1	0,5	0,5	ppmv
Cylinders / Contents						
F 10		7,5	-	-	-	kg
F 40		30,0	-	30,0	18,0	kg
F 50		37,5	37,5	-	-	kg
Bdl 12 * F 50		450,0	-	-	-	kg

Remarks

Applications:
Active gas in CO_2-Lasers
Component in artificial biological atmospheres
Solvent for supercritical extraction and chromatography (SFE / SFC)

* Analysis from evaporated liquid phase.

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