

Marking

CAS-Number	7782-44-7
Characterization acc. ADR	UN 1072, Oxygen, compressed, 2.2 (5.1) Class 2, 1 O

Cylinder Marking

shoulder:
white, blue body

Essential properties

Colourless, odorless, oxidizing gas, compressed, slightly heavier than air.

Symbols of Risks

oxidizing



gas, compressed

Physical Properties

molecular weight:	31,9988 kg/kmol
gas density at 0°C and 1,013 bar:	1,429 kg/m ³
density ratio to air:	1,1052

For additional safety information see Material-/safety data sheet No. 097 A (Sauerstoff)

Valves / Manifolds

Valve connection	DIN 477 Nr. 9: G 3/4, 300 bar CEN Nr. 7; W 30 x 2
Recommended Manifolds	Spectrotec



Specifications / Cylinders				
		technical	3.5	
Composition				
O ₂	>	99,5	99,95	Vol.-%
Impurities				
N ₂ + Ar	<	-	400	ppmv
Cylinders / Contents				
F 10 200 bar		2,1	2,1	m ³
F 20 200 bar		4,3	4,3	m ³
F 20 300 bar		6,1	6,1	m ³
F 50 200 bar		10,7	10,7	m ³
F 50 300 bar		15,2	15,2	m ³
B 12* F 50 200 bar		128,3	128,3	m ³
B 12* F 50 300 bar		182,5	182,5	m ³

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Description

Colourless, odorless, oxidizing gas. Liquid Oxygen is slightly blue coloured. May react violently with organic materials, e.g. grease and oil, even at room temperature.

detection Oxygen measuring equipment

Materials

Cylinders and valves: copper, brass, stainless steel, (steel)
Use no oil or grease! Valves have to be proved for heat-resistance under working conditions.
Seals: acc. to applicability test (PTFE)

Physical Properties	
molecular weight	31,9988 kg/kmol
Critical Point	
temperature	154,481 K
Pressure	50,422 bar
density	0,4361 kg/l
Triple Point	
temperature	54,359 K
Pressure	0,00149 bar
Boiling Point	
temperature	90,19 K; -183 °C
liquid density	1,1410 kg/l
evaporation heat	212,5 kJ/kg
vapour pressure at 20°C	
gas density at 0°C and 1,013 bar	1,429 kg/m ³
density ratio to air	1,1052
gas density at 15°C and 1 bar	1,337 kg/m ³
Conversion Factor	
liquid at Ts to m ³ gas (15°C, 1 bar)	0,8534
Virial Coefficient	
Bn at 0°C	-0,97*10 ⁻³ bar ¹
B30 at 30°C	-0,60*10 ⁻³ bar ¹
Gaseous State at 25°C and 1 bar	
specific heat capacity cp	0,9196 kJ/kg K
thermal conductivity	261,5*10 ⁻⁴ W/m K
dynam. viscosity	20,5*10 ⁻⁶ Ns/m ²