

Marking**CAS****Characterization acc. ADR****Cylinder Marking**

7440-37-1
UN 1006 ARGON,
COMPRESSED, 2.2, (E)



Shoulder color: dark green

Essential properties

compressed gas, heavier than air, colorless, odorless

Symbols of risks**Physical Properties**

molecular weight	39,948 kg/kmol
gas density at 0°C and 1,013 bar	1,784 kg/m ³
density ratio to air	1,3797

For additional safety information see safety data sheet *-AR-003A

Valves / Manifolds**Valve connection**

200 bar: acc. to national regulations
300 bar: ISO 5145 Nr. 1; W 30 x 2

Recommended Manifolds

Spectrolab FM 51 / FM 52exact
Spectrocem FE 51 / FE 52exact



Specification / receptacles							
		Argon 4.8 *	Argon 4.8 Spectro *	Argon 5.0	Argon 5.7 *	Argon 6.0	
Composition							
Ar	≥	99.998	99.998	99.999	99.9997	99.9999	Vol.-%
Impurities							
O ₂	≤	3	2	2	0.5	0.5	ppmv
N ₂	≤	10	-	5	1	0.5	ppmv
HC (as CH ₄)	≤	0.2	0.2	0.1	0.1	0.1	ppmv
CO + CO ₂	≤	0.2	0.2	0.1	0.1	0.1	ppmv
H ₂ O	≤	4	2	3	1	0.5	ppmv
Cylinder / Contents							
F 10 200 bar		2.1	-	2.1	-	2.1	m ³
F 50 200 bar		10.7	10.7	10.7	10.7	10.7	m ³
F 50 300 bar		15.3	-	15.3	-	-	m ³
F 50*12 200 bar		128.6	-	128.6	-	-	m ³
F 50*12 300 bar		183.4	-	183.4	-	-	m ³
MegaPack4 200 bar		128.6	-	-	-	-	m ³

Remarks**Applications:**

Shielding gas for special welding problems and sensitive materials (titanium, niob, tungsten, etc.)
Plasma gas for ICP (Inductive Coupled Plasma)
Spark erosion spectrometry
Plasma processes
Filling gas for windows

Contents in m³ at 15°C, 1 bar

*: not in each country available

MESSER 
Gases for Life

Messer Group GmbH

Messer-Platz 1

65812 Bad Soden

<https://www.messergroup.com>

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Description

Rare gas, colorless, odorless, heavier than air. In closed rooms the breathing air is displaced, no warning symptoms (danger of asphyxiation!).

Materials

Cylinders and Valves: any usual materials

Seals: PTFE, PCTFE, PVDF, PA, PP, IIR, NBR, CR, FKM, Q, EPDM

Physical Properties			
molecular weight	39,948 kg/kmol	vapour pressure at 20 °C	
critical point		gas density at 0 °C and 1,013 bar	1,784 kg/m ³
temperature	150,86 K	density ratio to air	1,3797
Pressure	48,98 bar	gas density at 15 °C and 1 bar	1,669 kg/m ³
density	0,5357 kg/l	conversion factor	
triple point		liquid at Ts to m ³ gas (15 °C, 1 bar)	0,8352
temperature	83,80 K	virial coefficient	
Pressure	0,6891 bar	Bn at 0 °C	-0,96*10 ⁻³ bar ⁻¹
boiling point		B30 at 30 °C	-0,61*10 ⁻³ bar ⁻¹
temperature	87,280 K; -186 °C	gaseous state at 25 °C and 1 bar	
liquid density	1,3940 kg/l	specific heat capacity cp	0,5216 kJ/kg K
evaporation heat	161,3 kJ/kg	thermal conductivity	178,2*10 ⁻⁴ W/m K
		dynam. viscosity	22,8*10 ⁻⁶ Ns/m ²