

# ARGON

Ar

## MARKING

**CAS-Number** 7440-37-1  
**Characterization** Argon, compressed, 2.2  
Class 2, 1A  
**Cylinder Marking** Blue



## Physical Properties

Molecular weight: 39,948 kg/kmol  
Density ratio to air: 1,3797

## ESSENTIAL PROPERTIES

Colourless, odorless rare gas, non-reactive, compressed, slightly heavier than air

### Symbol of Risks:

Non-flammable, non-toxic

Gas, compressed



**Major Hazards:** High Pressure, Suffocation

**UN Number:** UN1006 (gas)  
UN1951 (liquid refrigerated)

## MATERIALS

CYLINDER SIZE	CYLINDER MATERIAL	PRESSURE	VALVE	PURITY
40 liter 50 liter	Steel	150 bar 200 bar	BS3- 5/8 inch Female connection	99.7%

## CYLINDER RACKS

8 Cylinder Rack  
12 Cylinder Rack  
16 Cylinder Rack



## ARGON REGULATOR



## APPLICATIONS

**Welding and Cutting:** Argon is a shield gas used in arc welding, root shielding and plasma cutting.

Argon protects welds against oxidation as well as reduces fume emissions during welding

**Food and Beverage:** Can be used in a controlled atmosphere to replace nitrogen in most applications. Its solubility and molecular characteristics give it special properties for use with vegetables because it slows down metabolic reactions.

**Glass:** Argon is used for the filling of double glazing enclosures for high performance thermal isolation

**Metal Industry:** Argon is used to prevent contact between liquid metal and atmosphere. Applications include melt

stirring, tundish purging to prevent steel re-oxidation and secondary steel refining in vacuum degassers. Argon is consumed in the AOD process for decarburizing raw high-chromium steels while minimizing the chromium oxidation.

**Automotive:** Packaged pressurized argon is used to inflate car airbags.

**Electronics:** Ultra-pure argon is used as carrier gas for reactive molecules, as inert gas to protect semiconductors against impurities. In ionic state, argon is used for sputtering, ion implantation, annealing and etching processes for material manufacturing.