

# HYDROGEN 4.5

## PROPERTIES

### PHYSICAL & CHEMICAL



**OPEN  
24/7**



Molar mass: 2.016 g/mol  
 Melting point: -259°C  
 Boiling point: -252.8°C  
 Density of the gas phase (1.013 bar and 15°C): 0.0852 kg/ma  
 Density of the liquid phase (1.013 bar at boiling point): 0.07076 kg/l  
 Gas density (1.013 bar at boiling point): 1.312 kg/ma  
 Latent heat of fusion (1.013 bar at triple point): 58.158 kJ/kg  
 Latent heat of vaporization (at 1.013 bar boiling point): 454.3 kJ/kg  
 Critical temperature: -240°C  
 Critical pressure: 12.98 bar  
 Compressibility factor (Z) (1.013 bar and 15°C): 1.001  
 Concentration in the air: 0.00005% vol.

## APPLICATIONS :

### Mixed with Argon

- Shielding gas for TIG welding on stainless steel. In low content (up to 5%) in Argon under penalty of starting difficulties and reduction in the stability of the arc.
- Shielding gas and plasmagen in welding and plasma cutting.

### Mixed with Nitrogen

- Shielding gas for TIG welding of stainless steels.
- Reducing gas in heat treatment (furnaces). It is oxide reducing, flammable, detonating under certain conditions.

Laboratories and analyses: Hydrogen is used as a carrier gas in gas chromatography and in many analytical techniques. The most common are the use in flames of flame ionization detectors (FID) or flame photometry detectors (FPD).

## TECHNICAL INFORMATION

Purity :	Impurities :		
H2	N2	H2O	O2
≥ 99.995 %	≤ 60 ppm	≤ 5 ppm	≤ 2 ppm

### Conditioning :

Bottle
B50

