

PRODUCT TECHNICAL SHEET

HYDROGEN (H₂)

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Ref. No.: PS094



Hydrogen is a colourless, odourless, flammable gas. It is supplied as a permanent gas at high pressure in metal cylinders and is the lightest substance known to man. It is non-toxic although it does not support life. It also burns, having a flammability range of 4-75% in air

Gas Specification

Purity	>99.99%
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Physical Data

Specific Volume @20°C	11967.4 ml/g
Molecular Weight	2.0
Boiling point at 101,325 kPa	-252.8°C
Relative Density (air= 1) at 101,325 kPa	0.0695

Hazards

Form explosives mixture in air
All cylinders are portable gas containers and must be regarded as pressure vessels at all times
An asphyxiant in high concentrations
Only gas that becomes warm when expanding
Risk of static electricity sparking

Transport/ Storage Information



UN No 1049

Class 2.1

Do not allow cylinders to slide or come into contact with sharp edges
Do not store hydrogen cylinder with oxygen or other oxidant cylinders
May be stacked horizontally provided that they are firmly secured at each end to prevent rolling
First in - First out inventory system



Uses and Features

Hydrogen is widely used in the metallurgy field because of its ability to reduce metal oxides and prevent oxidation in the heat treating of certain metal and alloys
Hydrogen is widely used in the manufacture of chemicals, plastics and in petroleum refining
Hydrogen is used in the hydrogenation of vegetable and animal oils and fats.
Hydrogen is used in semiconductor manufacturing and in gas chromatography as a detector fuel.

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