

Hydrogen 3.0

1 General

Hydrogen 3.0 is a gas with a purity > 99.9%.

2 Uses

Hydrogen 3.0 can be used for combustion testing or storage.

3 Physical properties

Under normal conditions of temperature and pressure, hydrogen is a flammable, colourless and odourless gas, which is lighter than air. It is soluble in water up to 1.6 mg/L at 21°C.

► Chemical formula

H₂

► Physical state

Gas

► Molar mass

2.02g/mol

► Density (1013hpa/15°C)

0.084kg/m³

► Flammability limits

4 %-77%

► Gas density relative to air (1013hpa/15°C)

0.0695

► Melting point (1013hpa)

-259.2°C

► Boiling point (1013hpa)

-253°C

► Self-ignition point (1013hpa)

560°C

4 Chemical properties

Hydrogen is a powerful reducing agent, which ignites very easily when mixed with oxygen. Under unsafe conditions, it can cause violent reactions or even explosions to occur, or react to form flammable mixtures that can ignite with heat and/or shock, or in contact with oxidants, halogens (bromine, chlorine, fluorine, iodine) or gas (acetylene, carbon monoxide). Metal catalysts, such as platinum and nickel, intensify these reactions.

5 Specifications

- ▶ **H₂ Purity**
> 99.9 %
- ▶ **O₂ impurities**
< 50 ppm
- ▶ **H₂O impurities**
< 100 ppm
- ▶ **N₂ Impurities**
< 500 ppm
- ▶ **Lhyfe reference**
HY0006

6 Safety data sheet

Available at www.lhyfe.com

The manufacturer reserves the right to make changes to this datasheet at any time without notice. The user assumes all responsibility for the suitability of this product for their particular purpose responsibility and the compliance with all applicable laws and regulations.