

Marking

CAS

Characterization acc. ADR

Cylinder Marking

1333-74-0
UN 1049 HYDROGEN,
COMPRESSED, 2.1,(B/D)



Shoulder color: red

Essential properties

compressed gas, lighter than air, colorless, odorless, flammable

Symbols of risks



For additional safety information see safety data sheet *-H2-067A

Description

Colourless, odorless, flammable gas. Very much lighter than air. Forms highly explosive mixtures with oxygen or chlorine (detonating gas!). At high emanating velocities danger of self-ignition. The arising flame is nearly invisible.

Materials

Cylinders and valves: any usual materials.

Normalized / annealed steel only under observance of the required max. strength properties; danger of hydrogen embrittlement.

Seals: PCTFE, PVDF, PA PE

| Physical Properties | | | |
|---------------------|----------------|--|---|
| molecular weight | 2,0158 kg/kmol | vapour pressure at 20°C | |
| critical point | | gas density at 0°C and 1,013 bar | 0,0899 kg/m ³ |
| temperature | 33,19 K | density ratio to air | 0,0695 |
| Pressure | 13,15 bar | gas density at 15°C and 1 bar | 0,08409 kg/m ³ |
| density | 0,03012 kg/l | conversion factor | |
| triple point | | liquid at Ts to m ³ gas (15°C, 1 bar) | |
| temperature | 13,957 K | virial coefficient | |
| Pressure | 0,072 bar | Bn at 0°C | 0,6*10 ⁻³ bar ⁻¹ |
| boiling point | | B30 at 30°C | 0,58*10 ⁻³ bar ⁻¹ |
| temperature | 20,39 K | gaseous state at 25°C and 1 bar | |
| liquid density | 0,07079 kg/l | specific heat capacity cp | 14,3 kJ/kg K |
| evaporation heat | 445,6 kJ/kg | thermal conductivity | 1861 10 ⁻⁴ W/m K |
| | | dynam. viscosity | 8,92*10 ⁻⁶ Ns/m ² |