

Hydrogen sulphide

H₂S

Marking

CAS

Characterization acc. ADR

7783-06-4
UN 1053 HYDROGEN
SULPHIDE, 2.3 (2.1) (B/D),
ENVIRONMENTALLY HAZARDOUS
US

Cylinder Marking



Shoulder color: yellow

Essential properties

liquified gas, heavier than air, colorless, smelling like rotten eggs, flammable, irritant, toxic, toxic to aquatic life

Symbols of risks



For additional safety information see safety data sheet *-H2S-073

Description

Colourless, highly flammable, toxic, in presence of moisture corrosive, liquified gas with characteristic odor like rotten eggs. In high concentrations the olfactory nerves are stunned, so the warning effect is dropped. Strong reducing agent, possible reaction up to ignition with oxidizers. Acc. to ISO 10298: LC50/1h = 712 ppm.

Materials

Cylinders and valves: any usual materials.

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

Seals: PTFE, PCTFE, PVDF, PA, PE.

Physical Properties			
molecular weight	34,076 kg/kmol	vapour pressure at 20 °C	
critical point		gas density at 0 °C and 1,013 bar	1,5359 kg/m ³
temperature	373,2 K	density ratio to air	1,1879
Pressure	89,4 bar	gas density at 15 °C and 1 bar	1,435 kg/m ³
density	0,346 kg/l	conversion factor	
triple point		liquid at Ts to m ³ gas (15 °C, 1 bar)	
temperature	187,5 K	virial coefficient	
Pressure	0,227 bar	Bn at 0 °C	-10,0*10 ⁻³ bar ⁻¹
boiling point		B30 at 30 °C	-7,0*10 ⁻³ bar ⁻¹
temperature	213,0 K; -60,2 °C	gaseous state at 25 °C and 1 bar	
liquid density	0,9149 kg/l	specific heat capacity cp	1,0042 kJ/kg K
evaporation heat	548 kJ/kg	thermal conductivity	143*10 ⁻⁴ W/m K
		dynam. viscosity	1,286*10 ⁻⁵ Ns/m ²