HYDROGEN

0001
March 2002

CAS No: 1333-74-0
RTECS No: MW8900000
UN No: 1049
EC No: 001-001-00-9

H_2
Molecular mass: 2.0

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Extremely flammable. Many reactions may cause fire or explosion.	NO open flames, NO sparks, and NO smoking.	Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out; in other cases extinguish with water spray, powder, carbon dioxide.
EXPLOSION	Gas/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Use non-sparking handtools. Do not handle cylinders with oily hands.	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.
EXPOSURE			
Inhalation	Suffocation.	Closed system and ventilation.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	Serious frostbite.	Cold-insulating gloves.	Refer for medical attention.
Eyes		Safety spectacles.	
Ingestion			

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Remove all ignition sources. Evacuate danger area! Consult an expert! Ventilation. Remove vapour with fine water spray.	F+ Symbol R: 12 S: (2-)9-16-33 UN Hazard Class: 2.1

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-20S1049 NFPA Code: H0; F4; R0	Fireproof. Cool.

IPCS
International Programme on Chemical Safety

Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission

SEE IMPORTANT INFORMATION ON THE BACK.

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IMPORTANT DATA

Physical State; Appearance
ODOURLESS, COLOURLESS COMPRESSED GAS

Physical dangers
The gas mixes well with air, explosive mixtures are easily formed. The gas is lighter than air.

Chemical dangers
Heating may cause violent combustion or explosion. Reacts violently with air, oxygen, halogens and strong oxidants causing fire and explosion hazard. Metal catalysts, such as platinum and nickel, greatly enhance these reactions.

Occupational exposure limits
TLV: Simple asphyxiant (ACGIH 2002).

Routes of exposure
The substance can be absorbed into the body by inhalation.

Inhalation risk
On loss of containment, a harmful concentration of this gas in the air will be reached very quickly.

Effects of short-term exposure
Simple asphyxiant. See Notes.

PHYSICAL PROPERTIES

Boiling point: -253°C
Relative vapour density (air = 1): 0.07
Flash point: flammable gas

Auto-ignition temperature: 500-571°C
Explosive limits, vol% in air: 4-76

ENVIRONMENTAL DATA

NOTES

High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness or death.
Check oxygen content before entering area.
No odour warning if toxic concentrations are present.
Measure hydrogen concentrations with suitable gas detector (a normal flammable gas detector is not suited for the purpose).

ADDITIONAL INFORMATION