

HYDROGEN BROMIDE

0282

March 2001

CAS No: 10035-10-6
RTECS No: MW3850000
UN No: 1048 (anhydrous)
EC No: 035-002-00-0

Hydrobromic acid
(cylinder)
HBr
Molecular mass: 80.9

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible. Heating will cause rise in pressure with risk of bursting.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION	Risk of fire and explosion on contact with metals as a result of hydrogen formation.		In case of fire: cool cylinder by spraying with water but avoid contact of the substance with water.

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Burning sensation. Cough. Sore throat. Laboured breathing. Shortness of breath. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Refer for medical attention.
Skin	ON CONTACT WITH LIQUID: FROSTBITE. Redness. Pain. Blisters.	Cold-insulating gloves. Protective clothing.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention.
Eyes	Redness. Pain. Severe deep burns.	Eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work.	

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. NEVER direct water jet on liquid. Remove gas with fine water spray. Gas-tight chemical protection suit including self-contained breathing apparatus.	EU classification C Symbol R: 35-37 S: (1/2-)/7/9-26-45 UN classification UN Hazard Class: 2.3 UN Subsidiary Risks: 8

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-20S1048 or 20G2TC NFPA Code: H 3; F 0; R 0	Separated from incompatible materials. See Chemical Dangers. Cool. Dry. Ventilation along the floor.

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Programme on
Chemical SafetyPrepared in the context of cooperation between the International
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SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS COMPRESSED LIQUEFIED GAS, WITH PUNGENT ODOUR.

Physical dangers

The gas is heavier than air.

Chemical dangers

The solution in water is a strong acid, it reacts violently with bases and is corrosive. Reacts violently with strong oxidants and many organic compounds causing fire and explosion hazard. Attacks many metals forming flammable/explosive gas (hydrogen - see ICSC 0001).

Occupational exposure limits

TLV: 2 ppm (Ceiling value); (ACGIH 2004).

MAK: 2 ppm, 6.7 mg/m³; Peak limitation category: I(1); Pregnancy risk group: D (DFG 2006).

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

The substance is corrosive to the eyes, the skin and the respiratory tract. Inhalation of the gas may cause lung oedema (see Notes). Rapid evaporation of the liquid may cause frostbite.

PHYSICAL PROPERTIES

Boiling point: -67/C
Melting point: -87/C
Relative density (water = 1): 1.8

Solubility in water, g/100 ml at 20/C: 193
Vapour pressure, kPa at 20/C: 2445
Relative vapour density (air = 1): 2.8

ENVIRONMENTAL DATA

NOTES

The occupational exposure limit value should not be exceeded during any part of the working exposure.

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

The odour warning when the exposure limit value is exceeded is insufficient.

Do NOT spray water on leaking cylinder (to prevent corrosion of cylinder).

Turn leaking cylinder with the leak up to prevent escape of gas in liquid state.

Other UN number: 1788 Hydrobromic acid (solution), hazard class 8.

Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response.

Card has been partially updated in July 2007: see Occupational Exposure Limits.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information