Hydrobromic acid 44-50% in water
MSDS# 11107

Section 1 - Chemical Product and Company Identification

MSDS Name: Hydrobromic acid 44-50% in water
Catalog Numbers:
12317-0000, 12317-0010, 12317-0025, 12317-0050, 12317-5000, 22332-0000, 22332-5000, 42378-0000, 42378-5000, H/0900/27, H/0900/PB08, H/0900/PB17, H/0950/PB08, H/0950/PB17

Synonyms: Hydrogen bromide in aqueous solution.

Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG

For information in Europe, call: (01509) 231166
Emergency Number, Europe: 01509 231166

Section 2 - Composition, Information on Ingredients

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CAS#: 7732-18-5
Chemical Name: Water
%: 50-56
EINECS#: 231-791-2

Hazard Symbols:

Risk Phrases: 

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CAS#: 10035-10-6
Chemical Name: Hydrogen bromide
%: 44-50
EINECS#: 233-113-0

Hazard Symbols:

Risk Phrases: 

Text for R-phrases: see Section 16

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Causes burns. Irritating to respiratory system.

Potential Health Effects

Eye:
May cause irreversible eye injury. Vapor or mist may cause irritation and severe burns. Contact with liquid is corrosive to the eyes and causes severe burns.

Skin:
Contact with liquid is corrosive and causes severe burns and ulceration. The severity of injury depends on the concentration of the solution and the duration of exposure.

Ingestion:
Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.

Inhalation:
May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema.

**Causes**

chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

**Chronic:**

Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

**Section 4 - First Aid Measures**

**Eyes:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

**Skin:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

**Ingestion:**

If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

**Inhalation:**

POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:**

**Section 5 - Fire Fighting Measures**

**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Not flammable, but reacts with most metals to form flammable hydrogen gas. Use water spray to keep fire-exposed containers cool. Vapors may accumulate in confined spaces. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

**Extinguishing Media:**

Use extinguishing media most appropriate for the surrounding fire.

**Section 6 - Accidental Release Measures**

**General Information:**

Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO). Evacuate unnecessary personnel. Approach spill from upwind. Do not use metal tools.

**Section 7 - Handling and Storage**

**Handling:**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Keep away from strong bases and metals. Do not use metal spatula or other metal items. Do not breathe vapor or mist. Use only with adequate ventilation or respiratory protection.
Storage:
Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Corrosives area. Store protected from light and air. Store away from alkalies. Separate from oxidizing materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use a corrosion-resistant ventilation system.

Exposure Limits
CAS# 7732-18-5:
CAS# 10035-10-6:
United Kingdom, WEL - STEL: 3 ppm STEL; 10 mg/m3 STEL
United States OSHA: 3 ppm TWA; 10 mg/m3 TWA
Belgium - STEL: 2 ppm VLE; 6.7 mg/m3 VLE
France - VLE: 2 ppm VLE; 6.7 mg/m3 VLE
Malaysia: 3 ppm Ceiling; 9.9 mg/m3 Ceiling
Netherlands: 2 ppm STEL; 6.7 mg/m3 STEL
Spain: 3 ppm VLA-EC; 10 mg/m3 VLA-EC

Personal Protective Equipment
Eyes:
Wear chemical splash goggles and face shield.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: clear colorless to faint yellow
Odor: strong odor - acrid odor
pH:
Vapor Pressure: 16 mm Hg @ 20 deg C
Viscosity: Not available
Boiling Point: 126 - 128 deg C @ 760 mmHg
Freezing/Melting Point: -11 deg C (12.20 F)
Autoignition Temperature: Not applicable
Flash Point: Not applicable.
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: 1.490 g/cm3
Molecular Formula: HBr
Molecular Weight: 80.90

Section 10 - Stability and Reactivity
Chemical Stability:
Stable under normal temperatures and pressures. Darkens on exposure to light and air.

Conditions to Avoid:
Light, excess heat, prolonged exposure to air, confined spaces.

Incompatibilities with Other Materials
Metals, strong oxidizing agents, strong reducing agents, strong bases, amines, ammonia, fluorine, iron oxide, sulfuric acid, vinyl acetate, ozone, carbides, cyanides, sulfides, phosphides.

Hazardous Decomposition Products
Hydrogen bromide, hydrogen gas.

Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information
RTECS#:
CAS# 7732-18-5: ZC01100000
CAS# 10035-10-6: MW38500000
LD50/LC50:
RTECS: CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;
RTECS: CAS# 10035-10-6: Inhalation, mouse: LC50 = 814 ppm/1H; Inhalation, rat: LC50 = 2858 ppm/1H;.
Carcinogenicity:
Water -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Hydrogen bromide -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:
See actual entry in RTECS for complete information.

Section 12 - Ecological Information
Not available

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information
IATA
Shipping Name: HYDROBROMIC ACID
Hazard Class: 8
UN Number: 1788
Packing Group: II
IMO
Shipping Name: HYDROBROMIC ACID
Hazard Class: 8
UN Number: 1788
Packing Group: II
RID/ADR
Shipping Name: HYDROBROMIC ACID
Hazard Class: 8
UN Number: 1788
Packing Group: II

Section 15 - Regulatory Information
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: C
Risk Phrases:
  R 34  Causes burns.
  R 37  Irritating to respiratory system.
Safety Phrases:
S 7/9 Keep container tightly closed and in a well-ventilated place.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)
CAS# 7732-18-5: Not available
CAS# 10035-10-6: 1

Canada
CAS# 7732-18-5 is listed on Canada's DSL List
CAS# 10035-10-6 is listed on Canada's DSL List

US Federal
TSCA
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 10035-10-6 is listed on the TSCA Inventory.

Section 16 - Other Information
Text for R-phrases from Section 2
MSDS Creation Date:
6/08/1998
Revision #8 Date
6/06/2006
Revisions were made in Sections: 9

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