## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: 04088

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## 1.1. Product identifier

Product form : Mixture

Trade name : HYDROBROMIC ACID 48% EXTRA PURE

Product code : B-01376
Type of product : Acids

Synonyms : Hydrogen bromide 48% solution

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial. For professional use only

Use of the substance/mixture : Laboratory chemicals

Manufacture of substances

### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

**Bio-Chem Chemicals** 

5455, Nicholson Road Science Market, Ambala Cantt. 133001 Haryana (India)

+91-82952 41953

info@biofinechemical.com - www.biofinechemical.com

## 1.4. Emergency telephone number

Emergency number : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

## Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (inhal.), Category 3 H331
Skin corrosion/irritation, Category 1 H314
Specific target organ toxicity – Single exposure, Category 3, H335

Respiratory tract irritation

Full text of H- and EUH-statements: see section 16

## Adverse physicochemical, human health and environmental effects

Toxic if inhaled. May cause respiratory irritation. Causes severe skin burns and eye damage.

## 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :





GHS05 GHS06

Signal word (CLP) : Danger

Contains : Hydrogen bromide

Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.

H331 - Toxic if inhaled.

H335 - May cause respiratory irritation.

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Precautionary statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 - Wear protective clothing, eye protection, face protection, protective gloves. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

Nordic countries regulation

Denmark

MAL code : 00-6 (Executive Order No. 301 from 1993)

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %

## **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	CAS-No.: 7732-18-5 EC-No.: 231-791-2	52 – 54	Not classified
Hydrogen bromide	CAS-No.: 10035-10-6 EC-No.: 233-113-0 EC Index-No.: 035-002-00-0	46 – 48	Press. Gas Skin Corr. 1A, H314 STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

#### **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air

and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Call

a doctor.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Wash with plenty of water/.... Immediately

call a POISON CENTER/doctor. Rinse skin with water/shower. Call a physician

immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Call a physician

immediately.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Do not

induce vomiting. Call a physician immediately.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Causes serious eye damage. Serious damage to eyes.

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Symptoms/effects after ingestion : Burns.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Carbon dioxide. Foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

## 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment, Self-contained

breathing apparatus. Complete protective clothing.

### **SECTION 6: Accidental release measures**

## 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes.

Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective

equipment as required. For further information refer to section 8: "Exposure

controls/personal protection".

Emergency procedures : Ventilate area. Evacuate unnecessary personnel. Stop leak if safe to do so.

## 6.2. Environmental precautions

Avoid release to the environment.

## 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage. On land, sweep or shovel into

suitable containers. Soak up spills with inert solids, such as day or diatomaceous earth as

soon as possible.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

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## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use. Precautions for safe handling

: Do not breathe fume, vapours. Avoid contact with skin and eyes. Use only outdoors or in a

well-ventilated area. Wear personal protective equipment.

Hygiene measures Wash hands and other exposed areas with mild soap and water before eating, drinking or

> smoking and when leaving work. Wash contaminated dothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

## 7.2. Conditions for safe storage, including any incompatibilities

Technical measures Comply with applicable regulations.

Storage conditions Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Store in a well-ventilated place.

Incompatible materials Direct sunlight.

Store in a well-ventilated place. Storage area

Packaging materials Store always product in container of same material as original container.

### 7.3. Specific end use(s)

No additional information available

## **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

## 8.1.3. Air contaminants formed

No additional information available

## 8.1.4. DNEL and PNEC

No additional information available

## 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

## 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

## 8.2.2. Personal protection equipment

### Personal protective equipment:

Wear recommended personal protective equipment.

## Personal protective equipment symbol(s):







## 8.2.2.1. Eye and face protection

## Eye protection:

Chemical goggles or face shield

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#### 8.2.2.2. Skin protection

### Skin and body protection:

Wear a mask

## Hand protection:

Protective gloves

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

Wear appropriate mask

### 8.2.2.4. Thermal hazards

No additional information available

## 8.2.3. Environmental exposure controls

#### **Environmental exposure controls:**

Avoid release to the environment.

## **SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Colourless to pale yellow.

Appearance Clear liquid. Molecular mass 80.91 g/mol Odour Pungent. Odour threshold Not available Melting point Not applicable : -11 °C Freezing point : 126 - 128 °C Boiling point Flammability Non flammable. Lower explosion limit Not available Upper explosion limit : Not available Flash point Not available

Flash point : Not available
Auto-ignition temperature : Not available
Decomposition temperature : Not available

pH : <1

Viscosity, kinematic Not available Solubility Water: Miscible Partition coefficient n-octanol/water (Log Kow) Not available Vapour pressure 8 mm Hg at 25 °C Vapour pressure at 50°C Not available Density 1.49 g/cm3 at 25 °C Relative density Not available Relative vapour density at 20°C 2.8 (Air = 1.0)Particle characteristics : Not applicable

## 9.2. Other information

## 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

Thermal decomposition generates: Corrosive vapours.

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## 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Direct sunlight. Open flame.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Thermal decomposition generates: Corrosive vapours.

## **SECTION 11: Toxicological information**

## 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Toxic if inhaled.

HYDROBROMIC ACID 48% EXTRA PURE	
ATE CLP (gases)	700 ppmv/4h
ATE CLP (vapours)	3 mg/l/4h
ATE CLP (dust,mist)	0.5 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns.

pH: < 1

Serious eye damage/irritation : Assumed to cause serious eye damage

pH: < 1

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

Hydrogen bromide (10035-10-6)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

## 11.2. Information on other hazards

No additional information available

## **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Hazardous to the aquatic environment, short-term : Not classified

(acute)

Hazardous to the aquatic environment, long-term : Not c

(chronic)

: Not classified

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## 12.2. Persistence and degradability

HYDROBROMIC ACID 48% EXTRA PURE	
Persistence and degradability Rapidly degradable	
Hydrogen bromide (10035-10-6)	
Persistence and degradability Rapidly degradable	
Water (7732-18-5)	
Persistence and degradability Rapidly degradable	

#### 12.3. Bioaccumulative potential

No additional information available

## 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

#### 12.7. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance

with local, regional, national and/or international regulation. Disposal must be done

according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1. UN number or ID number

 UN-No. (ADR)
 : UN 1788

 UN-No. (IMDG)
 : UN 1788

 UN-No. (IATA)
 : UN 1788

 UN-No. (ADN)
 : UN 1788

 UN-No. (RID)
 : UN 1788

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : HYDROBROMIC ACID
Proper Shipping Name (IMDG) : HYDROBROMIC ACID
Proper Shipping Name (IATA) : Hydrobromic acid
Proper Shipping Name (ADN) : HYDROBROMIC ACID
Proper Shipping Name (RID) : HYDROBROMIC ACID

Transport document description (ADR) : UN 1788 HYDROBROMIC ACID, 8, II, (E)

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Transport document description (IMDG) : UN 1788 HYDROBROMIC ACID, 8, II Transport document description (IATA) : UN 1788 Hydrobromic acid, 8, II : UN 1788 HYDROBROMIC ACID, 8, II Transport document description (ADN) : UN 1788 HYDROBROMIC ACID, 8, II Transport document description (RID)

## 14.3. Transport hazard class(es)

Transport hazard class(es) (ADR) : 8 Danger labels (ADR) 8



**IMDG** 

Transport hazard class(es) (IMDG) : 8 Danger labels (IMDG) 8



IATA

Transport hazard class(es) (IATA) : 8 Danger labels (IATA) : 8



ADN

Transport hazard class(es) (ADN) : 8

: 8 Danger labels (ADN)



RID

Transport hazard class(es) (RID) : 8 8 Danger labels (RID)



14.4. Packing group

Packing group (ADR) : 11 Packing group (IMDG) : 11 Packing group (IATA) : 11 Packing group (ADN) : 11 Packing group (RID) : 11

14.5. Environmental hazards

Dangerous for the environment : No Marine pollutant : No

Other information : No supplementary information available

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## 14.6. Special precautions for user

Overland transport

Classification code (ADR): C1Special provisions (ADR): 519Limited quantities (ADR): 1IExcepted quantities (ADR): E2

Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP15
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions : TP2

(ADR)

Tank code (ADR) : L4BN
Tank special provisions (ADR) : TU42
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Hazard identification number (Kemler No.) : 80

Orange plates

80 1788

Tunnel restriction code (ADR) : E EAC code : 2R

Transport by sea

Limited quantities (IMDG) : 1 L Excepted quantities (IMDG) E2 Packing instructions (IMDG) P001 IBC02 IBC packing instructions (IMDG) Tank instructions (IMDG) T7 Tank special provisions (IMDG) TP2 EmS-No. (Fire) F-A EmS-No. (Spillage) S-B Stowage category (IMDG) С

Segregation (IMDG) : SGG1, SG36, SG49

Properties and observations (IMDG) : Colourless liquid. An aqueous solution of the gas hydrogen bromide. Highly corrosive to

most metals. Causes burns to skin, eyes and mucous membranes.

MFAG-No : 154

Air transport

PCA Excepted quantities (IATA) : E2 PCA Limited quantities (IATA) : Y840 PCA limited quantity max net quantity (IATA) : 0.5L PCA packing instructions (IATA) : 851 PCA max net quantity (IATA) : 1L CAO packing instructions (IATA) 855 CAO max net quantity (IATA) 30L Special provisions (IATA) A3. A803 ERG code (IATA) 8L

Inland waterway transport

Classification code (ADN) : C1
Special provisions (ADN) : 519
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : C1
Special provisions (RID) : 519
Limited quantities (RID) : 1L

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Excepted quantities (RID) : E2

Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions : TP2

(RID)

Tank codes for RID tanks (RID) : L4BN
Special provisions for RID tanks (RID) : TU42
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE6
Hazard identification number (RID) : 80

#### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

### **SECTION 15: Regulatory information**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.1.1. EU-Regulations

#### **REACH Annex XVII (Restriction List)**

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	HYDROBROMIC ACID 48% EXTRA PURE

#### **REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

#### **REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

## PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

## POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

#### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

## Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

## 15.1.2. National regulations

## Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).

Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must

be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the

shipping route (according to § 10).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

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## Netherlands

SZW-lijst van kankerverwekkende stoffen

SZW-lijst van mutagene stoffen

SZW-lijst van reprotoxische stoffen -

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling

: None of the components are listed None of the components are listed SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

: None of the components are listed

: None of the components are listed

Denmark

MAL code : 00-6 (Executive Order No. 301 from 1993)

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### **SECTION 16: Other information**

Abbreviations and acronyms:		
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	

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Abbreviations and acronyms:	
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
Press. Gas	Gases under pressure
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.