

SAFETY DATA SHEET

Version 8.8
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Product Number SIGALD - 339245

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

a. Product name : Hydrobromic acid 48 wt. % in H₂O,
≥99.99%

Product Number : 339245

Brand : SIGALD
b. Recommended use of the chemical and restrictions on use : **Identified uses**
Laboratory chemicals

c. Company : 씨그마알드리치코리아(유)
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SECTION 2: Hazards identification**a. GHS Classification**

Corrosive to metals (Category 1)

Acute toxicity, Inhalation (Category 3)

Skin corrosion/irritation (Category 1B)

Serious eye damage/eye irritation (Category 1)

Specific target organ toxicity - single exposure (Category 3), respiratory tract irritation

b. GHS-Labelling

Pictogram



Signal Word

Danger

Hazard Statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

Precautionary Statements

Prevention

P234	Keep only in original packaging.
P260	Do not breathe mist or vapours.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P321	Specific Treatment (See SDS section 4).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant (decided by the manufacturer or authority) container, as this is a metal corrosive material.

Disposal

P501	Dispose of contents/ container according to waste-related laws
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c. Other hazards which do not result in classification

none

SECTION 3: Composition/information on ingredients

3b Mixtures

Formula	: HBr
Molecular weight	: 80.91 g/mol

Component		Classification	Concentration
Hydrobromic acid			
CAS-No.	10035-10-6	Met. Corr. 1; Acute Tox. 3; Skin Corr./Irrit. 1A; Eye Dam./Irrit. 1; STOT SE 3; H290, H331, H314, H318, H335 Concentration limits: >= 40 %: Skin Corr. 1B, H314; 10 - < 40 %: Skin Irrit. 2, H315; 10 - < 40	>= 45 - < 50 %
EC-No.	233-113-0		
Index-No.	035-002-00-0		

	%: Eye Irrit. 2, H319; >= 10 %: STOT SE 3, H335;	
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For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

a. In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

b. In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

c. If inhaled

After inhalation: fresh air. Call in physician.

d. If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

e. Most important acute symptoms/effects

No data available

Most important delayed symptoms/effects

No data available

f. Notes to physician

No data available

General advice

First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION 5: Firefighting measures

a. Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which shall not be used for safety reasons

For this substance/mixture no limitations of extinguishing agents are given.

b. Specific hazards arising from the chemical

Not combustible. Ambient fire may liberate hazardous vapours.

c. Special protective actions for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

a. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

b. Environmental precautions

Do not let product enter drains.

c. Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

SECTION 7: Handling and storage

a. Precautions for safe handling

b. Conditions for safe storage

No metal containers.

Tightly closed.

Air and light sensitive.

c. Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

SECTION 8: Exposure controls/personal protection

a. Control parameters

Components	CAS-No.	Value	Control parameters	Basis
Hydrobromic acid	10035-10-6	C	2 ppm	KR OEL

Components with DNEL

Components	CAS-No.	Application Area	Exposure routes	Value	Health effect
Hydrobromic acid	10035-10-6	Worker DNEL, acute	Inhalation	6.7 mg/m ³	Local and systemic effects
Hydrobromic acid	10035-10-6	Worker DNEL, longterm	Inhalation	6.7 mg/m ³	Local and systemic effects

Components with PNEC

Components	CAS-No.	Compartment	Value	
Hydrobromic acid	10035-10-6	Fresh water	0.019 mg/l	

b. Appropriate engineering controls

No data available

c. Personal protective equipment

Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact

Material: Chloroprene

Minimum layer thickness: 0.6 mm

Break through time: 60 min

Material tested: Camapren® (KCL 722 / Aldrich Z677493, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin and body protection

protective clothing

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

a. Appearance

Form liquid

Color light brown

b. Odor No data available

c. Odor Threshold No data available

d. pH No data available

e. Melting point No data available

f. Initial boiling point 100 °C at 1,013 hPa

g. Flash point	Not applicable
h. Evaporation rate	No data available
i. Flammability (solid, gas)	No data available
j. Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
k. Vapor pressure	10 hPa at 25 °C
l. Water solubility	soluble
m. Relative vapour density	2.79 - (Air = 1.0)
n. Density	1.49 g/mL at 25 °C
o. Partition coefficient: n- octanol/water	No data available
p. Autoignition temperature	Not applicable
q. Decomposition temperature	No data available
r. Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
s. Molecular weight	80.91 g/mol

SECTION 10: Stability and reactivity

a. Chemical stability

No data available

b. Possibility of hazardous reactions

No data available

c. Conditions to avoid

no information available

d. Incompatible products

Strong oxidizing agents, Strong bases, Ammonia, Ozone, FluorineMetals

e. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen bromide gas
Other decomposition products - No data available

Thermal decomposition

No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute toxicity estimate Inhalation - 4 h - 6.25 mg/l - vapour(Calculation method)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Dermal: No data available

Skin corrosion/irritation

Remarks: Mixture causes burns.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

Risk of blindness!

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

Hydrobromic acid

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information**12.1 Toxicity****Mixture**

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

Components**Hydrobromic acid**

Toxicity to daphnia
and other aquatic
invertebrates

static test EC50 - Daphnia magna (Water flea) - 19 mg/l - 48 h
(Regulation (EC) No. 440/2008, Annex, C.2)

Toxicity to algae

static test EC50 - Pseudokirchneriella subcapitata (green algae)
- 56 mg/l - 48 h
(Regulation (EC) No. 440/2008, Annex, C.3)

SECTION 13: Disposal considerations

a. Disposal methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

IMDG

UN number: 1788 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: HYDROBROMIC ACID
Marine pollutant :no

IATA

UN number: 1788 Class: 8 Packing group: II
Proper shipping name: Hydrobromic acid

SECTION 15: Regulatory information

a. Regulation under the Occupational Safety and Health Act

Harmful Substances Required Permission for Manufacture - Not applicable

Harmful Substances Prohibited from Manufacturing - Not applicable

Harmful Agents to be kept below Occupational Exposure Limits - Hydrobromic acid, CAS 10035-10-6

Harmful Agents Required to be kept below Permission Levels

Not applicable

Controlled Substances Subject to Environment Monitoring - Hydrobromic acid, CAS 10035-10-6

Controlled Substances Subject to Health Examination - Not applicable

Hazardous Substances Subject to Process Safety Management (PSM) Reporting Obligation

Chemical name/Classification	Manufacturing or handling quantity	Storage quantity
Hydrogen bromide	10,000 kg	10,000 kg

Hazardous substances requiring management - Hydrobromic acid, CAS 10035-10-6

Special Management Materials - Not applicable

Occupational exposure limit substances - Please refer to chapter 8

b. Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

Toxic Chemicals - Hydrobromic acid, CAS 10035-10-6

Restricted Chemicals - Not applicable

Prohibited Chemicals - Not applicable

Accident Precaution Chemicals - Not applicable

c. Dangerous Substances Safety Management Act

Not Applicable to Dangerous Materials

d. Wastes Control Act

Follow article 13 of the act to dispose the product waste

e. Other regulations

KECI Number

On the inventory, or in compliance with the inventory

SECTION 16: Other information

a. List of references

b. Issuing date: 2023.04.14

c. Version: 8.8 Revision Date 2025.05.21

e. Further information

Text of H-code(s) and R-phrases mentioned in Section 3

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.
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