

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2017

Version number 14

Revision: 24.07.2017

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

- **1.1 Product identifier**
- **Trade name:** pH-Minus flüssig
- Article number: 0810
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Water treatment
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**

 Chemoform AG
 Heinrich-Otto-Str. 28
 73240 Wendlingen, Germany
 www.chemoform.com
 info@chemoform.com

 VÁGNER POOL, s.r.o.
 Nad Safinou 348
 252 42 Vestec
 Praha západ, CZECH REPUBLIC
 tel: +420 244 913 177
 www.vagnerpool.com
- **Further information obtainable from:** datenblatt@chemoform.com
- **1.4 Emergency telephone number:**
 National Poison Inform. Centre
 Medical Toxicology Unit
 Avalonley Road
 London SE14 5ER
 +44 (171) 635 91 91

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
 Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 Eye Dam. 1 H318 Causes serious eye damage.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



GHS05

- Signal word Danger
- Hazard-determining components of labelling:
sulphuric acid
- Hazard statements
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
- Precautionary statements
P101 If medical advice is needed, have product container or label at hand.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2017

Version number 14

Revision: 24.07.2017

Trade name: pH-Minus flüssig

(Contd. of page 1)

- P102 Keep out of reach of children.
 P260 Do not breathe mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• 2.3 Other hazards

• Results of PBT and vPvB assessment


- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

• 3.2 Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

• Dangerous components:

CAS: 7664-93-9	sulphuric acid	15-50%
EINECS: 231-639-5	 Met. Corr.1, H290; Skin Corr. 1A, H314	
Index number: 016-020-00-8		
Reg.nr.: 01-2119458838-20-0069		
01-2119458838-20-XXXX		

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

• 4.1 Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
 Seek immediate medical advice.
 Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
 Call a doctor immediately.
 Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 Rinse out mouth and then drink plenty of water.
 Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

SECTION 5: Firefighting measures

• 5.1 Extinguishing media

• Suitable extinguishing agents:

- Water spray
- Foam
- Carbon dioxide
- Use fire extinguishing methods suitable to surrounding conditions.

• For safety reasons unsuitable extinguishing agents: Water with full jet

• 5.2 Special hazards arising from the substance or mixture

- In case of fire, the following can be released:
 Sulphur dioxide (SO₂)

• 5.3 Advice for firefighters

• Protective equipment:

- Wear self-contained respiratory protective device.
- Wear fully protective suit.

(Contd. on page 3)

-GB-

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2017

Version number 14

Revision: 24.07.2017

Trade name: pH-Minus flüssig

- (Contd. of page 2)
- **Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
When diluting always pour product into water and not vice versa.
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
See item 8.
- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
 - Requirements to be met by storerooms and receptacles:
Provide acid-resistant floor.
Suitable material for receptacles and pipes: Stainless steel.
Unsuitable material for receptacle: aluminium.
 - Information about storage in one common storage facility: Store away from flammable substances.
 - Further information about storage conditions:
Store in dry conditions.
Protect from humidity and water.
Keep container tightly sealed.
 - Storage class: 8B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**

7664-93-9 sulphuric acid (25-50%)
WEL Long-term value: 0.05* mg/m³
*mist: defined as thoracic fraction

 - Regulatory information WEL: EH40/2011
 - Additional information: The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
 - General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2017

Version number 14

Revision: 24.07.2017

Trade name: pH-Minus flüssig

(Contd. of page 3)

- Respiratory protection:
Use suitable respiratory protective device only when aerosol or mist is formed.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- For the permanent contact gloves made of the following materials are suitable:
Butyl rubber, BR
PVC gloves
Fluorocarbon rubber (Viton)
- As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR
- Not suitable are gloves made of the following materials:
Strong material gloves
Leather gloves
- Eye protection:
Face protection



Tightly sealed goggles

- Body protection:
Acid resistant protective clothing
Boots

SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical properties

• General Information

• Appearance:

Form:	Fluid
Colour:	Colourless
• Odour:	Characteristic
• Odour threshold:	Not determined.

• **pH-value at 20 °C:** 0.1

• Change in condition

Melting point/freezing point:	-35 °C
Initial boiling point and boiling range:	295 °C

• **Flash point:** Not applicable.

• **Flammability (solid, gas):** Not applicable.

• Ignition temperature:

Decomposition temperature: Not determined.

• **Auto-ignition temperature:** Product is not selfigniting.

• **Explosive properties:** Product does not present an explosion hazard.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2017

Version number 14

Revision: 24.07.2017

Trade name: pH-Minus flüssig

(Contd. of page 4)

- **Explosion limits:**
 - Lower: Not determined.
 - Upper: Not determined.
- **Vapour pressure at 20 °C:** 23 hPa
- **Density at 20 °C:** 1.39 g/cm³
- **Relative density:** Not determined.
- **Vapour density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
 - Dynamic: Not determined.
 - Kinematic: Not determined.
- **Solvent content:**
 - Organic solvents: 0.0 %
 - Water: 51.0 %
 - VOC (EC): 0 %
- **9.2 Other information:** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:**
 - Reacts violently with water.
 - When diluting, always add acid to water, never vice versa.
 - Reacts with reducing agents.
 - Reacts with light alloys to form hydrogen.
 - Reacts with various metals.
 - Reacts with alkali (lyes).
 - Heating occurs when water is added.
- **10.4 Conditions to avoid:** No further relevant information available.
- **10.5 Incompatible materials:** Bases, metals, alloys, chlorine containing chemicals
- **10.6 Hazardous decomposition products:**
 - Sulphur oxides (SO_x)
 - Hydrogen, sulfur oxides

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects:**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**

7664-93-9 sulphuric acid

 - Oral LD50 2,140 mg/kg (rat)
 - Inhalative LC50 0.51 mg/l (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation:** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation:** Causes serious eye damage.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2017

Version number 14

Revision: 24.07.2017

Trade name: pH-Minus flüssig

(Contd. of page 5)

- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

• 12.1 Toxicity

• Aquatic toxicity:

7664-93-9 sulphuric acid

EC50 58 mg/l (Activated sludge)

29 mg/l (daphnia)

LC50 42 mg/l (Gambusia affinis)

• 12.2 Persistence and degradability

Anorganic product, is not eliminable from water by means of biological cleaning processes.

• 12.3 Bioaccumulative potential

No further relevant information available.

• 12.4 Mobility in soil

No further relevant information available.

• Additional ecological information:

• General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

• 12.5 Results of PBT and vPvB assessment

• PBT:

Not applicable.

• vPvB:

Not applicable.

• 12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

• 13.1 Waste treatment methods

• Recommendation

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• Uncleaned packaging:

• Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

• Recommended cleansing agents:

Water, if necessary together with cleansing agents.

SECTION 14: Transport information

• 14.1 UN-Number

• ADR, IMDG, IATA

UN2796

• 14.2 UN proper shipping name

• ADR

2796 SULPHURIC ACID

• IMDG, IATA

SULPHURIC ACID

• 14.3 Transport hazard class(es)

• ADR, IMDG, IATA



• Class

8 Corrosive substances.

• Label

8

• 14.4 Packing group

• ADR, IMDG, IATA

II

(Contd. on page 7)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2017

Version number 14

Revision: 24.07.2017

Trade name: pH-Minus flüssig

(Contd. of page 6)

• 14.5 Environmental hazards:	
• Marine pollutant:	No
• 14.6 Special precautions for user	Warning: Corrosive substances.
• Danger code (Kemler):	80
• EMS Number:	F-A,S-B
• Segregation groups	Acids
• Stowage Category	B
• 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
• Transport/Additional information:	

• ADR	
• Excepted quantities (EQ):	E2
• Limited quantities (LQ)	1L
• Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
• Transport category	2
• Tunnel restriction code	E

• IMDG	
• Limited quantities (LQ)	1L
• Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
• UN "Model Regulation":	UN 2796 SULPHURIC ACID, 8, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
- Classification according to Regulation (EC) No 1272/2008
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
- Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr. 1: Corrosive to metals – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- * Data compared to the previous version altered.

GB