

Safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH)
Date of issue: 02.05.2017 Supersedes edition of: ---

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

1.1 Product identifier

Product name: Antikalk flüssig

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

Descaling agent

1.3 Details of the supplier of the safety data sheet

Company: Otto Oehme GmbH
 Industriestraße 20
 D-90584 Allersberg Deutschland
 Tel. +49 9176 98050
 info@oehme-lorito.de

1.4 Emergency telephone number

GIZ Nord Poisons Centre, Göttingen Tel. +49 (0) 551 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Met. Corr. 1, H290

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Full text of hazard statements: See under section 16.

2.2 Label elements

Labelling (Regulation (EC) No. 1272/2008)

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H290 May be corrosive to metals.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER / doctor.

Contains: Phosphoric acid.

2.3 Other hazards

None known.

SECTION 3: Composition / information on ingredients

Solution in water.

Hazardous components (Regulation (EC) No. 1272/2008)

<i>Chemical name</i>				<i>Content</i>
<i>CAS-No.</i>	<i>EC-No.</i>	<i>EC-Index-No.</i>	<i>Classification</i>	
Phosphoric acid				> 10 – < 20 %
7664-38-2	231-633-2	015-011-00-6	Met. Corr. 1, H290 Skin Corr. 1B, H314	
REACH Registration Number: 01-2119485924-24				
2-Phosphonobutane-1,2,4-tricarboxylic acid				< 5 %
37971-36-1	253-733-5		Met. Corr. 1, H290 Eye Irrit. 2, H319	
REACH Registration Number: 01-2119436643-39				

Full text of hazard statements: See under section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Fresh air. Call in physician.

After skin contact: Wash off with plenty of water. Immediately remove contaminated clothing. Call a physician immediately.

After eye contact: Rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist immediately.

After swallowing: Make victim drink plenty of water (two glasses at most), avoid vomiting (risk of perforation). Immediately call in physician. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

Irritation and corrosion, cough, shortness of breath, pain, spasm, shock, conjunctivitis.

Risk of blindness!

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Not Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Further information

Prevent fire-fighting water from entering surface water or groundwater.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Caution: Risk of slipping.

Do not inhale vapours/aerosols. Avoid substance contact. Use personal protective equipment as required, see section 8.2. Ensure supply of fresh air in enclosed rooms. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions

Do not allow to enter sewerage system.

6.3 Methods and material for containment and cleaning up

Take up with incombustible liquid-absorbent material. Forward for disposal. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Notes for safe handling

Ensure adequate ventilation. Avoid contact with skin and eyes. Do not inhale vapours/aerosols. Avoid generation of vapours/aerosols.

Notes for prevention of fire and explosion

Not required.

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7.2 Conditions for safe storage, including any incompatibilities

Store cool above 5 °C. Keep away from sun and heat.
Tightly closed in a well-ventilated place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Phosphoric acid

ECTLV

Name	Phosphoric acid
Limit value 8 hours	1 mg/m ³

Short term (< 15 min.)	2mg/m ³
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EH40 WEL

Name	Phosphoric acid
Short term exposure limit (STEL)	2 mg/m ³

Time weighted average (TWA)	1 mg/m ³
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8.2 Exposure controls

Individual protection measures

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye / face protection:

Tightly fitting safety goggles (EN 166).

Hand protection:

Material: Nitrile rubber.

Thickness: 0.1 mm

Breakthrough time: > 480 min

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN 374, e.g. Franz Mensch Nitrile Safe Premium.

This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

Respiratory protection:

Required when vapours/aerosols are generated. Filter A2 P2 (EN 14387).

Other protective equipment

Acid-resistant protective clothing.

Hygiene measures

Change contaminated clothing. Apply skin- protective barrier cream. Wash hands after working with substance.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Form:	liquid
Colour:	colourless
Odour:	characteristic
pH value	1
Melting point	not specified
Boiling point	not specified
Ignition temperature	not applicable
Flash point	not applicable
Explosion limits	lower not applicable
	upper not applicable
Density (23 °C)	~ 1.1 g/cm ³
Viscosity, dynamic	not specified
Solubility in water	soluble

9.2 Other information

None.

SECTION 10: Stability and reactivity**10.1 Reactivity**

Corrosive in contact with metals.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with: Metals, metal alloys. Possible formation of: Hydrogen.

Violent reactions possible with: Bases, metallic oxides.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Alkalis. Aluminium, iron / iron-containing compounds, mild steel. Gives off hydrogen by reaction with metals.

10.6 Hazardous decomposition products

See section 5.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute oral toxicity

LD₅₀ rat: 1530 mg/kg (IUCLID; Phosphoric acid)

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

LD₅₀ rat: > 6500 mg/kg (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Acute dermal toxicity

LD₅₀ rabbit: 2740 mg/kg (IUCLID; Phosphoric acid)

LD₅₀ rabbit: > 4000 mg/kg (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Acute inhalation toxicity

LC₅₀ rat: > 0.85 mg/l /1 h (RTECS; Phosphoric acid)

Symptoms: Mucosal irritations, cough, shortness of breath. Possible damages: damage of respiratory tract.

Skin irritation

Rabbit: Causes burns (IUCLID; Phosphoric acid)

Rabbit: No irritation (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Eye irritation

Rabbit: Causes burns (IUCLID; Phosphoric acid).

Conjunctivitis. Risk of serious damage to eyes. Risk of blindness!

Rabbit: Eye irritation (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Sensitisation

Human experience: Negative (IUCLID; Phosphoric acid).

Genotoxicity in vitro

Ames test: Negative (IUCLID; Phosphoric acid).

Mutagenicity (bacteria, Ames test): Negative (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid).

Reproductive toxicity

No impairment of reproductive performance in animal experiments (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid).

Teratogenicity

Did not show teratogenic effects in animal experiments (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid).

Specific target organ toxicity – single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity – repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification.

11.2 Further information

Systemic effects: Shock, convulsions.

Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

Gambusia affinis LC₅₀: 138 mg/l /96 h (external MSDS; Phosphoric acid)

Leuciscus idus LC₅₀: > 500 mg/l /24 h (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Toxicity to daphnia and other aquatic invertebrates

Daphnia magna: EC₅₀: 265 mg/l /24 h (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Toxicity to algae

Scenedesmus subspicatus IC₅₀: 140 mg/l / 72 h (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Toxicity to bacteria

Activated sludge: EC₅₀: 270 mg/l (IUCLID; Phosphoric acid)

Photobacterium Phosphoreum EC₀: > 2500 mg/l (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

12.2 Persistence and degradability

Biodegradability

Biodegradation: 0 % / 28 d (OECD 301E; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Biodegradation: 30 – 40 % / 28 d (OECD 302A; 2-Phosphonobutane-1,2,4-tricarboxylic acid)

Not readily biodegradable (2-Phosphonobutane-1,2,4-tricarboxylic acid)

12.3 Bioaccumulative potential

Partition coefficient: n-octanol / water: log P_{ow}: -1.36 (external MSDS; 2-Phosphonobutane-1,2,4-tricarboxylic acid).

Low bioaccumulation (2-Phosphonobutane-1,2,4-tricarboxylic acid).

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Additional ecological information:

Biological effects: Harmful effect due to pH shift. Caustic even in diluted form.

Depending on the concentration, phosphorous compounds may contribute to the eutrophication of water supplies.

Discharge into the environment must be avoided.

Do not allow to enter waters, waste water, or soil!

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SECTION 13: Disposal considerations**13.1 Waste treatment methods***Product:*

Chemicals must be disposed of in compliance with the respective national regulations.

Code of the waste	Name according to directive 2000/532/EC:
200129*	Detergents containing dangerous substances.
070601*	Aqueous washing liquids and mother liquors.

Packaging:

Product packaging must be disposed of in compliance with the country-specific regulations or must be to a packaging return system.

Code of the waste	Name according to directive 2000/532/EC:
200139	plastics.

SECTION 14: Transport information*Road and rail, ADR/RID*

UN 1805 PHOSPHORIC ACID SOLUTION, 8, III (E)

Environmentally hazardous: No.

Inland waterway, ADN

Not tested.

Sea, IMDG-Code

UN 1805 PHOSPHORIC ACID SOLUTION, 8, III

EmS: F-A, S-B

Marine pollutant: No.

Air, IATA-DGR

UN 1805 PHOSPHORIC ACID SOLUTION, 8, III

Environmentally hazardous: No.

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture***EU regulations*

Ingredients according to Regulation (EC) on detergents No. 648/2004:

Phosphates: 15 % or over but less than 30 %

Phosphonates: Less than 5 %

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Full text of hazard statements referred to under sections 2 and 3:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.