

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2019

Version number 4

Revision: 12.04.2019

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

### 1.1 Product identifier

Trade name: **Urine Scale and Limescale Remover, ready for use**

Article number: 11981, 11979

### 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

Cleaning agent/ Cleaner

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

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH  
Lechstrasse 28  
D 90451 Nürnberg

Tel. +49(0)911-642960  
Fax. +49(0)911-644456  
e-mail info@akemi.de

Further information obtainable from:

Laboratory

### 1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH  
Tel. +49(0)911-64296-59  
Reachable during the following office hours:  
Monday – Thursday from 07:30 a.m. to 16:30 p.m.  
Friday from 07:30 a.m. to 13:30 p.m.  
+44 (171) 635 91 91  
National Poison Inform. Centre  
Medical Toxicology Unit  
Avalonley Road  
London SE14 5ER

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS05

Signal word

Danger

Hazard-determining components of labelling:

phosphoric acid

Hazard statements

H318 Causes serious eye damage.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read label before use.  
P280 Wear 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.

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- **2.3 Other hazards**
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures**

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

· **Dangerous components:**

CAS: 7664-38-2	phosphoric acid	<10%
EINECS: 231-633-2	☠ Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318	
Index number: 015-011-00-6	☠ Acute Tox. 4, H302	
Reg.nr.: 01-2119485924-24		

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

non-ionic surfactants, perfumes	<5%
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- **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:** No special measures required.
- **After inhalation:** Supply fresh air.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed**

- **Information for doctor:** Gastric or intestinal disorders  
Acidosis  
Symptoms in intoxication with acids:  
In case of oral intake symptoms depend on concentration and acidity of incorporated acid, and are corrosive eschar in mouth and throat, vomiting, severe dysphagia, shock and coma. Therapy measures: drink plenty of water. Administer 20 g Magnesia usta in milk oral; no hydrogen carbonate oral; pain relief measures; in indication of acidosis infusion of sodium hydrogencarbonate solution(5%).

**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:** CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

**5.3 Advice for firefighters**

- **Protective equipment:** No special measures required.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Particular danger of slipping on leaked/spilled product.

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- **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).
- **6.4 Reference to other sections** No dangerous substances are released.  
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** Keep receptacles tightly sealed.  
No special measures required.
- Information about fire - and explosion protection: No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Protect from frost.
- Storage class: 12
- **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:

#### 7664-38-2 phosphoric acid

WEL	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>
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- DNELs

#### 7664-38-2 phosphoric acid

Dermal	DNEL ( Langzeit-wiederholt)	0.1 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	2 mg/m <sup>3</sup> Air (ARB)
	DNEL (Langzeit-wiederholt)	1-10.7 mg/m <sup>3</sup> Air (ARB)
		0.36-4.57 mg/m <sup>3</sup> Air (BEV)

- Additional information: The lists valid during the making were used as basis.

### 8.2 Exposure controls

- Personal protective equipment:
- General protective and hygienic measures: Do not eat, drink, smoke or sniff while working.  
Use skin protection cream for skin protection.  
Clean skin thoroughly immediately after handling the product.
- Respiratory protection: Not required.
- Protection of hands: Preventive skin protection by use of skin-protecting agents is recommended.

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After use of gloves apply skin-cleaning agents and skin cosmetics.  
Skin protection agent recommendation for preventive skin shelter without use of protective gloves:

STOKODERM (<http://www.stoko.com>)

Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (<http://www.stoko.com>)

Skin protection recommendation for skin cleaning after product handling:

FRAPANTOL (<http://www.stoko.com>)

Skin protection agent recommendation for skin aftercare:

STOKO VITAN (<http://www.stoko.com>)

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).

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

Butyl rubber, BR

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

Chloroprene rubber, CR

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

Value for the permeation: Level  $\leq$  6800

The exact break trough 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

Butoject (KCL, Art\_No. 897, 898)

Nitrile rubber, NBR

Camatril (KCL, Art\_No. 730, 731, 732, 733)

Fluorocarbon rubber (Viton)

Vitoject (KCL, Art\_No. 890)

Chloroprene rubber, CR

Camapren (KCL, Art\_No. 720, 722, 726)

· As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Camatril (KCL, 730, 731, 732, 733)

Chloroprene rubber, CR

Camapren (KCL, Art\_No. 720, 722, 726)

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- Not suitable are gloves made of the following materials:
  - Leather gloves
  - Strong material gloves
- Eye protection: Goggles recommended during refilling
- Body protection: Protective work clothing

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

Form: Fluid  
 Colour: Yellow-brown

· Odour: Pleasant

· Odour threshold: Not determined.

· pH-value: Not determined.

**· Change in condition**

Melting point/freezing point: Undetermined.  
 Initial boiling point and boiling range: 100 °C

· Flash point: Not applicable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

**· Explosion limits:**

Lower: Not determined.  
 Upper: Not determined.

· Vapour pressure at 20 °C: 23 hPa

· Density at 20 °C: 1.04 g/cm<sup>3</sup>

· 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: 92.0 %

· **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 with alkali and metals.

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- Reacts with strong oxidising agents.
- Reacts with metals forming hydrogen.
- No further relevant information available.
- No further relevant information available.
- 10.4 Conditions to avoid**
- 10.5 Incompatible materials:**
- 10.6 Hazardous decomposition products:** Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>)  
Irritant gases/vapours

**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:

**ATE (Acute Toxicity Estimates)**

Oral	LD50	16,483 mg/kg (rat)
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**7664-38-2 phosphoric acid**

Oral	LD50	1,250 mg/kg (rat)
	NOAEL	≥410 mg/kg (rat)
Dermal	LD50	2,740 mg/kg (rabbit)
Inhalative	LC50	850 mg/l (rat)
	LC50/1h	1.69 mg/l (rat)

- Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- 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.
- 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:

**7664-38-2 phosphoric acid**

EC50	270 mg/l (BES)
	270 mg/l (bacteria)
EC50/48h	>100 mg/l (daphnia magna)
NOELR/72h	100 mg/l (Desmodesmus subspicatus)
EC50/72h	>100 mg/l (Desmodesmus subspicatus)
LC50/96h	138 mg/l (Gambusia affinis)
	98-106 mg/l (lem)
	3-3.25 mg/l (Iepomis macrochirus)

- 12.2 Persistence and degradability** No further relevant information available.
- 12.3 Bioaccumulative potential** No further relevant information available.
- 12.4 Mobility in soil** No further relevant information available.

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- Additional ecological information:
- General notes: 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.  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
- **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 Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
- Recommendation: Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- |  |  |
|--|--|
| <b>14.1 UN-Number</b>  |  |
| · <u>ADR, ADN, IMDG, IATA</u>  | Void   |
| <b>14.2 UN proper shipping name</b>  |  |
| · <u>ADR, ADN, IMDG, IATA</u>  | Void   |
| <b>14.3 Transport hazard class(es)</b>   |  |
| · <u>ADR, ADN, IMDG, IATA</u>  |  |
| · <u>Class</u>   | Void   |
| <b>14.4 Packing group</b>  |  |
| · <u>ADR, IMDG, IATA</u>   | Void   |
| <b>14.5 Environmental hazards:</b>   |  |
| · <u>Marine pollutant:</u>   | No   |
| <b>14.6 Special precautions for user</b>                                       | Not applicable.                                      |
| <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable.                                      |
| · <u>Transport/Additional information:</u>                                     | Not dangerous according to the above specifications. |
| · <u>UN "Model Regulation":</u>  | Void   |

### 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
- National regulations:
- Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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- VOC EU 1.4 g/l
- **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.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.
- Recommended restriction of use refer to Technical Data Sheet (TDS)
- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann  
Elke Hake  
Fon ++49 (0)911 64296-59  
@mail E.Hake@akemi.de
- 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)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
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)  
DNEL: Derived No-Effect Level (REACH)  
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  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

- \* Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC