Safety Data Sheet
acc. to OSHA HCS

Printing date 01/22/2014 Reviewed on 01/22/2014

*
1 Identification

· **Product identifier**
· Trade name: **Rust Remover Paste**

· Article number: 10824
· 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

· **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

· Information department: Laboratory
· 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.

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2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC


Corrosive

Causes burns.
· Information concerning particular hazards for human and environment: The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
· Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**
· GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
· Hazard pictograms


GHS05

· Signal word: Danger
· Hazard-determining components of labeling: phosphoric acid
· Hazard statements: H314 Causes severe skin burns and 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.
P260 Do not breathe vapours.

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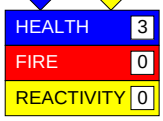
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· NFPA ratings (scale 0 - 4)

Health = 3
Fire = 0
Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 3
Fire = 0
Reactivity = 0

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

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

	non-ionic surfactants	Xn R22; Xi R41 Eye Dam. 1, H318	1-5%
CAS: 7664-38-2 EINECS: 231-633-2 Index number: 015-011-00-6	phosphoric acid	C R34 Skin Corr. 1B, H314	25-50%

· Additional information: For the wording of the listed risk phrases refer to section 16.

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4 First-aid measures

· **Description of first aid measures**
· General information: Immediately remove any clothing soiled by the product.
· After inhalation: Supply fresh air.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
· After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
· Information for doctor: 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, vomitting, 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%).

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· Most important symptoms and effects, both acute and delayed: Profuse sweating
Gastric or intestinal disorders

· Indication of any immediate medical attention and special treatment needed: If swallowed, gastric irrigation with added, activated carbon.

5 Fire-fighting measures

· **Extinguishing media**

· Suitable extinguishing agents: CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture**: No further relevant information available.

· **Advice for firefighters**

· Protective equipment: No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**: Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.

· **Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

· **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.

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7 Handling and storage

· **Handling:**

· Precautions for safe handling: Keep receptacles tightly sealed.

· Information about protection against explosions and fires: No special measures required.

· **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: Do not store together with alkalis (caustic solutions).

· Further information about storage conditions: Keep receptacle tightly sealed.
Protect from frost.

· Storage class: 8 B

· **Specific end use(s)**: No further relevant information available.

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* **8 Exposure controls/personal protection**

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· Components with limit values that require monitoring at the workplace:	
7664-38-2 phosphoric acid	
PEL	Long-term value: 1 mg/m³
REL	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³
TLV	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³

· Additional information: The lists that were valid during the creation were used as basis.

· **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.

· Breathing equipment: Not required.
· Protection of hands: Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
Akemi skin protection agent recommendation for preventive skin shelter without use of protective gloves:
STOKODERM (http://www.stoko.com)
Akemi skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:
STOKO EMULSION (http://www.stoko.com)
Akemi skin protection recommendation for skin cleaning after product handling:
FRAPANTOL (http://www.stoko.com)
Akemi 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 anylyses 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).

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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

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· Penetration time of glove material	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. The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. Value for the permeation: Level ≤ 6, 480 min
· For the permanent contact gloves made of the following materials are suitable:	Nitrile rubber, NBR Camatril (KCL, Art No. 730, 731, 732, 733) Chloroprene rubber, CR Camapren (KCL, Art No. 720, 722, 726) Butyl rubber, BR Butoject (KCL, Art No. 897, 898) Fluorocarbon rubber (Viton) Vitoject (KCL, Art No. 890)
· As protection from splashes gloves made of the following materials are suitable:	Nitrile rubber, NBR Camatril (KCL, 730, 731, 732, 733) Dermatril (KCL, Art No. 740, 741, 742) Chloroprene rubber, CR Camapren (KCL, Art No. 720, 722, 726)
· Not suitable are gloves made of the following materials:	Leather gloves Strong gloves
· Eye protection:	 Tightly sealed goggles
· Body protection:	Protective work clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· General Information	
· Appearance:	
Form:	Pasty
Color:	Yellow-brown
· Odor:	Weak, characteristic
· pH-value at 20 °C (68 °F):	< 1
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· Flash point:	Not applicable.
· Ignition temperature:	370 °C (698 °F)
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)
· Density at 20 °C (68 °F):	1.27 g/cm³ (10.598 lbs/gal)
· Specific gravity at 20 °C (68 °F):	1.27 g/cm³ (10.598 lbs/gal)

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· Solubility in / Miscibility with Water:	Fully miscible.
· Viscosity: Dynamic at 20 °C (68 °F):	13000 mPas
· Solvent content:	
Organic solvents:	0.0 %
Water:	52.9 %
Solids content:	46.3 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· **Possibility of hazardous reactions** Reacts with alkali and metals.
Reacts with strong oxidizing agents.
Reacts with metals forming hydrogen.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** Phosphorus oxides (e.g. P2O5)
Irritant gases/vapors

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11 Toxicological information

· **Information on toxicological effects**
· Acute toxicity:

· LD/LC50 values that are relevant for classification:

7664-38-2 phosphoric acid

Oral	LD50	1530 mg/kg (rat)
Dermal	LD50	2740 mg/kg (rabbit)
Inhalative	LC50/1h	1.69 mg/l (rat)

· Primary irritant effect:
· on the skin: Caustic effect on skin and mucous membranes.
· on the eye: Strong caustic effect.
· Sensitization: No sensitizing effects known.
· Additional toxicological information: Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
The product shows the following dangers according to internally approved calculation methods for preparations:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

7631-86-9	silicon dioxide, chemically prepared	3

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· NTP (National Toxicology Program)

None of the ingredients is listed.

* **12 Ecological information**

· **Toxicity**

· Aquatic toxicity:

7664-38-2 phosphoric acid	
EC50	270 mg/l (BES)
	270 mg/l (bacteria)
LC50/96h	138 mg/l (Gambusia affinis)

· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· Bioaccumulative potential No further relevant information available.
· Mobility in soil No further relevant information available.
· **Additional ecological information:**
· General notes: Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
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.
Water hazard class 1 (Self-assessment): slightly hazardous for water
· **Results of PBT and vPvB assessment**
· PBT: Not applicable.
· vPvB: Not applicable.
· **Other adverse effects** No further relevant information available.

* **13 Disposal considerations**

· **Waste treatment methods**
· Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· Recommendation: Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

14 Transport information

· **UN-Number**
· DOT, ADR, IMDG, IATA UN3260

· **UN proper shipping name**
· DOT Corrosive solid, acidic, inorganic, n.o.s. (Phosphoric acid, 1,4-Butynediol)
· ADR 3260 Corrosive solid, acidic, inorganic, n.o.s. (Phosphoric acid, 1,4-Butynediol)
· IMDG, IATA CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, 1,4-BUTYNEDIOL)

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· **Transport hazard class(es)**

· DOT

· Class	8 Corrosive substances.
· Label	8

· ADR

· Class	8 (C2) Corrosive substances
· Label	8

· IMDG, IATA

· Class	8 Corrosive substances.
· Label	8
· **Packing group**	
· DOT, ADR, IMDG, IATA	III
· **Environmental hazards:**	
· Marine pollutant:	No
· **Special precautions for user**	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	UN3260, Corrosive solid, acidic, inorganic, n.o.s. (Phosphoric acid, 1,4-Butynediol), 8, III

* **15 Regulatory information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

7664-38-2	phosphoric acid

· TSCA (Toxic Substances Control Act):

7664-38-2	phosphoric acid
7631-86-9	silicon dioxide, chemically prepared
7732-18-5	water, distilled, conductivity or of similarpurity

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· Proposition 65

· Chemicals known to cause cancer:
None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)
None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.

· MAK (German Maximum Workplace Concentration)
None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

· GHS label elements — The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms

GHS05

· Signal word — Danger

· Hazard-determining components of labeling: phosphoric acid

· Hazard statements — H314 Causes severe skin burns and 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.
P260	Do not breathe vapours.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

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· National regulations:

· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· VOC USA 0.0 g/l

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* **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.

· **Department issuing MSDS:** Laboratory

· **Contact:** Dieter Zimmermann

· Date of preparation / last revision 01/22/2014 / -

· 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 Organization
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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent