Material Safety Data Sheet – Alkaline Cleaning Reagent

According to Regulation (EC) No 1907/2006

Creation date: 19/02/2025 Version number 5 Revision: 31/03/2026

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

1.1 Product identifiers

Product name: Alkaline Cleaning Reagent

Brand: LUMICKS

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

Identified uses: Laboratory chemicals

Uses advised against: This product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

Company:

LUMICKS

Paalbergweg 3

1105 AG Amsterdam

The Netherlands

Email Address: info@lumicks.com

1.4 Emergency telephone number

In case of an incident involving this product, please contact the appropriate emergency response service below:

24-hour Emergency Response for Hazardous Materials

In case of emergencies requiring immediate assistance, dial the local emergency response phone number.

- **Netherlands:** National Poisons Information Center (NVIC): +31 (0)88 755 8000
  (For use by medical professionals only. Intended exclusively for informing medical personnel in cases of acute intoxication.)

For non-emergency inquiries regarding the safe handling of this product, please contact LUMICKS support center, +31(0) 85 303 27 45.

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. 1B **H314:** Causes severe skin burns and eye damage.
Eye Dam. 1 **H318:** Causes serious eye damage.

GHS07

STOT SE 3 **H335:** May cause respiratory irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms:

Signal word: Danger

Hazard-determining components of labelling:

- Tripotassium phosphate
- Potassium hydroxide

Hazard statements:

- H290: May be corrosive to metals.
- H314: Causes severe skin burns and eye damage.
- H335: May cause respiratory irritation.

Precautionary statements:

- P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
- P310: Immediately call a POISON CENTER/doctor.
- P321: Specific treatment (see on this label).
- P405: Store locked up.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

The substances in the mixture do not meet PBT/vPvB criteria according to REACH Annex XIII.

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

Component	CAS No.	EC No.	Weight %	CLP Classification – Regulation (EC) No 1272/2008
Tripotassium phosphate	7778-53-2	231-907-1	≥15- <30%	Eye Dam. 1 (H318) STOT SE 3 (H335)
Potassium hydroxide	1310-58-3	215-181-3	<1%	Skin Corr. 1A (H314) Acute Tox. 4 (H302) Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5% Skin Corr. 1B; H314: 2% ≤ C < 5% Skin Irrit. 2; H315: 0.5% ≤ C < 2% Eye Irrit. 2; H319: 0.5% ≤ C < 2%
Water	7732-18-5	231-791-2	≥ 69%	

Regulation (EC) No 648/2004 on detergents/Labeling for contents

Component	Weight %
Phosphates	≥15- <30%
Phosphonates, non-ionic surfactants, anionic surfactants	< 5%

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 advice: Show this material safety data sheet to the doctor in attendance.

- **After inhalation**: Supply fresh air. In case of unconsciousness, place patient stably in side position for transportation.
- **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 plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed: None reasonably foreseeable.

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:

- Use fire extinguishing methods suitable for surrounding conditions.
- Water spray
- Foam
- Fire-extinguishing powder

For safety reasons, unsuitable extinguishing agents: Full water jet.

5.2 Special hazards arising from the substance or mixture

During heating or in case of fire, poisonous gases are produced.

5.3 Advice for firefighters

Protective equipment: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

- Mouth respiratory protective device.
- Wear protective equipment.
- Keep unprotected people away.

6.2 Environmental precautions

- Dilute with plenty of water.
- Do not allow to enter sewers, surface water, or groundwater.

6.3 Methods and material for containment and cleaning up

- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Use neutralizing agent.
- Dispose of contaminated material as waste according to section 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

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

Information about fire- and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Do not store together with acids.

Further information about storage conditions:

- Optimum storage temperature 20°C.
- For details, see the product label.

Storage class (TRGS 510): 8 B

7.3 Specific end use(s)

Use in laboratories.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

The product does not contain relevant quantities of materials with critical values that have to be monitored.

DNEL = Derived No Effect Level.

Relevant DNELs of components					
Component	**CAS No.**	**End-point**	**Threshold level**	**Used in**	**Exposure time**
Potassium hydroxide	1310-58-3	DNEL	1 mg/m^3 (Human inhalation)	Worker	Chronic – local effects/

8.2 Exposure controls

Ensure that suitable personal protective equipment is available. In agreement with legal requirements, absorb any spills and dispose of waste. Monitor the effectiveness of control measures; consider the need for health monitoring; identify and implement corrective measures.

Appropriate engineering controls No further data; see section 7.

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.
- Avoid contact with the skin.

Respiratory protection:

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. (EN 136/140/141/145/143/149).

Hand protection

The protective gloves to be used must satisfy the specification of EC Directive 89/686/EEC and the resulting EN374 standard.

Protective gloves

Material of gloves Recommended thickness of the material: ≥ 0.7 mm, Nitrile rubber, NBR

Penetration time of glove material Penetration time: > 480 min.

Eye/face protection

Tightly sealed goggles (EN 166)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state:	Liquid
Colour:	Colourless to yellow
Odour:	Characteristic
Odour threshold:	Not determined
Melting point/freezing point:	Not relevant
Boiling point or initial boiling point and boiling range:	100 °C
Flammability	Not applicable

Lower and upper explosion limit

- **Lower:** Not applicable
- **Upper:** Not applicable

Flash point: Not relevant
Decomposition temperature: > 230 °C
pH at 20 °C: 13.2
Viscosity

- **Kinematic viscosity:** Not determined
- **Dynamic viscosity:** Not determined

Solubility

- **Water:** Fully miscible

Partition coefficient n-octanol/water (log value): Not determined
Vapour pressure at 20 °C 23 hPa
Density and/or relative density

- **Density at 20 °C:** 1.4 g/cm^3
- **Vapour density:** Not relevant

9.2 Other information
Appearance

- **Form** Fluid

Important information on protection of health and environment, and on safety

- **Ignition temperature:** Product is not self-igniting
- **Explosive properties:** Product does not present an explosion hazard.

Oxidising properties: Not relevant
Evaporation rate: Not relevant

SECTION 10: Stability and Reactivity

10.1 Reactivity

None reactivity is known based on information available.

10.2 Chemical Stability

Thermal decomposition / conditions to be avoided: Thermal decomposition above 230 °C.

10.3 Possibility of Hazardous Reactions

Exothermic reaction with: acids

10.4 Conditions to Avoid

No further relevant information available.

10.5 Incompatible Materials

Do not store together with acids.

10.6 Hazardous Decomposition Products

Thermal decomposition can cause the release of irritant gases and vapours.

SECTION 11: Toxicological Information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification				
Component	**CAS No.**	**LD50 Oral**	**LD50 Dermal**	**LC50 Inhalation**
Tripotassium phosphate	7778-53-2		7340 mg/kg (Rabbit)	
Potassium hydroxide	13010-58-3	333-388 mg/kg (Rat)		

Skin corrosion/irritation: Causes severe skin burns.
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
Germ cell mutagenicity: Based on available data, the classification criteria for germ cell mutagenicity 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: May cause respiratory irritation.
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.

11.2 Information on other hazards

Endocrine disrupting properties: This product does not contain any known or suspected endocrine disruptors.

SECTION 12: Ecological Information

12.1 Toxicity

Aquatic toxicity

Component	Fish	Daphnia	Algae
Tripotassium phosphate (CAS: 7778-53-2)	LC50/96h >100 mg/l (Fish)	EC50/48h >100 mg/l (Daphnia)	EC50/72h >100 mg/l (Algae)

12.2 Persistence and degradability
Biodegradability according to OECD >80%

12.3 Bioaccumulative potential
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties
The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects
Additional ecological information
COD-value: 125,00 g/kg
General notes:

- Do not allow undiluted product or large quantities of it to reach groundwater, water courses, or sewage systems. Must not reach sewage water or drainage ditches undiluted or unneutralized.
- Rinse-off of larger amounts into drains or the aquatic environment may lead to increased pH values. A high pH value harms aquatic organisms.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Waste from residues/Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.
European Waste Catalogue (EWC)	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
Other information	Do not flush to sewer. Waste codes should be assigned by user based on the application for which the product was

used. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

SECTION 14: Transport Information

14.1 UN number or ID number

ADR, IMDG, IATA: UN3266

14.2 UN proper shipping name

ADR: 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (tripotassium phosphate)

IMDG: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (tripotassium phosphate)

IATA: Corrosive liquid, basic, inorganic, n.o.s. (tripotassium phosphate)

14.3 Transport hazard class(es)

Corrosive substances

Class (ADR, IMDG, IATA): 8
Label (ADR, IMDG, IATA): 8

14.4 Packaging group
(ADR, IMDG, IATA): II

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user:

Warning: Corrosive substances.

14.7 Maritime transport in bulk according to IMO instruments

IMO instruments: Not applicable

14.8 Additional information

ADR

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 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (TRIPOTASSIUM PHOSPHATE), 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

REGULATION (EC) No 1005/2009 on substances that deplete the ozone layer

Technical instructions (air):

Class	Share in %
NK	< 1

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

Detergents Regulation (EC) No. 648/2004

The surfactants in this formula meet the conditions of biodegradability as established in the Detergents Regulation (EC) No. 648/2004. Documents confirming this are kept available for responsible authorities of member states and are only provided at their direct request.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other Information

The information in this safety data sheet is correct to the best of our knowledge at the time of printing. The information is intended to provide reference points for the safe handling of the product specified in this safety data sheet when storing, processing, transporting, and disposing of it. It does not represent any guarantee of the properties of the product. LUMICKS

and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. For further information please contact info@lumicks.com. The information is not transferable to other products. Insofar as the product is mixed or processed with other materials or is subject to processing, the information in this safety data sheet, unless expressly indicated otherwise, cannot be transferred to the resulting new material.

Relevant phrases
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Abbreviations and acronyms
- **ADR:** Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- **EC:** European Communities
- **IMDG:** International Maritime Code for Dangerous Goods
- **IATA:** International Air Transport Association
- **GHS:** Globally Harmonised System of Classification and Labelling of Chemicals
- **CAS:** Chemical Abstracts Service (division of the American Chemical Society)
- **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. 1A:** Skin corrosion/irritation – Category 1A
- **Eye Dam. 1:** Serious eye damage/eye irritation – Category 1B
- **STOT SE 3:** Specific target organ toxicity (single exposure) – Category 3A

Training advice
Chemical hazard awareness training, incorporating labelling, Safety Data Sheet, Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.

End of Safety Data Sheet