SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

DESCALER

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **DESCALER**
Substance type: CLP Mixture

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

Use of the Substance/Mixture : ACID DESCALER

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

COMPANY IDENTIFICATION
Ecolab Ltd.
PO Box 11; Winnington Avenue
Northwich, Cheshire,, CW8 4DX, United Kingdom
TEL: + 44 (0)1606 74488

LOCAL COMPANY IDENTIFICATION
Ecolab Ltd.
PO Box 11; Winnington Avenue
Northwich, Cheshire,, CW8 4DX, United Kingdom
TEL: + 44 (0)1606 74488

For Product Safety information please contact: msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : Trans-European
+441618841235
+32-(0)3-575-5555 Trans-European Address European Economic Area HQ

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Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1	H290
Skin corrosion, Sub-category 1B	H314
Serious eye damage, Category 1	H318

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**
P280 Wear protective gloves/ eye protection/ face protection.

Response:

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.

Hazardous components which must be listed on the label:
Phosphoric Acid

2.3 Other hazards

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Phosphoric Acid	7664-38-2 231-633-2 01-2119485924-24	Skin corrosion Category 1B; H314 Corrosive to metals Category 1; H290	25 - < 30
C12-C14 LINEAR ALCOHOL ETHYLENE OXIDE/PROPYLENE OXIDE ADDUCT	68439-51-0 POLYMER	Chronic aquatic toxicity Category 3; H412	1 - < 2.5

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled : Remove to fresh air.
Treat symptomatically.
Get medical attention if symptoms occur.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Use a mild soap if available.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Get medical attention immediately.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical attention immediately.

If swallowed	:	Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Depending on combustion properties, decomposition products may include following materials: Carbon oxides Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Flush away traces with water.
For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : Do not ingest. Do not breathe spray, vapour. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Keep only in original packaging. Absorb spillage to prevent material damage.

Suitable material : Keep in properly labelled containers., Plastic material

Unsuitable material :
Aluminium, Mild steel

7.3 Specific end uses

Specific use(s) : ACID DESCALER

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Phosphoric Acid	7664-38-2	OELV - 8 hrs (TWA)	1 mg/m3	IR_OEL
Further information	IOELV	Indicative Occupational Exposure Limit Value		
		OELV - 15 min (STEL)	2 mg/m3	IR_OEL
Further information	IOELV	Indicative Occupational Exposure Limit Value		

DNEL

Phosphoric Acid	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1 mg/m3
		End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 2 mg/m3
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0.73 mg/m3

8.2 Exposure controls

Appropriate engineering controls

Effective exhaust ventilation system.
Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.Remove and wash contaminated clothing before re-use.Wash face, hands and any exposed skin thoroughly after handling.Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles
Face-shield

Hand protection (EN 374) : Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes

Respiratory protection (EN 143, 14387)	:	When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type:A-P

Environmental exposure controls

General advice	:	Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	clear, pale
Odour	:	Characteristic
Flash point	:	> 100 °C
pH	:	< 2, 100 % (20 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.2
Solubility(ies)		
Water solubility	:	soluble in cold water, soluble in hot water
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Strong bases

Aluminium
Mild steel

10.6 Hazardous decomposition products

Hazardous decomposition products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Toxicity

Product

Acute oral toxicity : There is no data available for this product.

Acute inhalation toxicity : There is no data available for this product.

Acute dermal toxicity : There is no data available for this product.

Skin corrosion/irritation : There is no data available for this product.

Serious eye damage/eye irritation : There is no data available for this product.

Respiratory or skin sensitization : There is no data available for this product.

Carcinogenicity	:	There is no data available for this product.
Reproductive effects	:	There is no data available for this product.
Germ cell mutagenicity	:	There is no data available for this product.
Teratogenicity	:	There is no data available for this product.
STOT - single exposure	:	There is no data available for this product.
STOT - repeated exposure	:	There is no data available for this product.
Aspiration toxicity	:	There is no data available for this product.

Components

Acute oral toxicity	:	Phosphoric Acid LD50 rat: > 2,600 mg/kg C12-C14 LINEAR ALCOHOL ETHYLENE OXIDE/PROPYLENE OXIDE ADDUCT LD50 rat: > 2,000 mg/kg

Components

Acute dermal toxicity	:	Phosphoric Acid LD50 rabbit: > 2,000 mg/kg C12-C14 LINEAR ALCOHOL ETHYLENE OXIDE/PROPYLENE OXIDE ADDUCT LD50 rat: > 5,000 mg/kg

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns.
Ingestion	:	Causes digestive tract burns.
Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough
Further information	:	no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Product

Environmental Effects	:	This product has no known ecotoxicological effects.
Toxicity to fish	:	no data available
Toxicity to daphnia and other aquatic invertebrates	:	no data available
Toxicity to algae	:	no data available

Components

Toxicity to fish	:	C12-C14 LINEAR ALCOHOL ETHYLENE OXIDE/PROPYLENE OXIDE ADDUCT 48 h LC50 Leuciscus idus (Golden orfe): > 1 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates	:	Phosphoric Acid 48 h EC50 Daphnia magna (Water flea): > 100 mg/l C12-C14 LINEAR ALCOHOL ETHYLENE OXIDE/PROPYLENE OXIDE ADDUCT 24 h EC50 Daphnia magna (Water flea): > 1 mg/l

Components

Toxicity to algae	:	Phosphoric Acid 72 h EC50 Desmodesmus subspicatus (green algae): > 100 mg/l C12-C14 LINEAR ALCOHOL ETHYLENE OXIDE/PROPYLENE OXIDE ADDUCT 72 h EC50 Desmodesmus subspicatus (green algae): > 1 mg/l

12.2 Persistence and degradability

Product

no data available

Components

Biodegradability	:	Phosphoric Acid Result: Not applicable - inorganic C12-C14 LINEAR ALCOHOL ETHYLENE OXIDE/PROPYLENE OXIDE ADDUCT Result: Readily biodegradable.

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
Guidance for Waste Code selection	:	Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No

14.6 Special precautions for user: Not applicable.

Air transport (IATA)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

INTERNATIONAL CHEMICAL CONTROL LAWS

NATIONAL REGULATIONS GERMANY
Water contaminating class (Germany) : WGK 2
Classification according to AwSV, Annex 1

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Corrosive to metals 1, H290	Calculation method
Skin corrosion 1B, H314	Calculation method
Serious eye damage 1, H318	Calculation method

Full text of H-Statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute

for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; ECx – Concentration associated with x% response; ELx – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErCx – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO – International Maritime Organization; ISHL – Industrial Safety and Health Law (Japan); ISO – International Organisation for Standardization; KECI – Korea Existing Chemicals Inventory; LC50 – Lethal Concentration to 50 % of a test population; LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL – International Convention for the Prevention of Pollution from Ships; n.o.s. – Not Otherwise Specified; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; NZIoC – New Zealand Inventory of Chemicals; OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS – Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR – (Quantitative) Structure Activity Relationship; REACH – Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet	:	IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer. The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERIcards, Non European official regulatory data and other data sources.
Prepared By	:	Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.