

SAC ACID**Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product name : SAC ACID
Product code : 114044E
Use of the Substance/Mixture : Cleaning product
Substance type: : Mixture

For professional users only.

Product dilution information : No dilution information provided.

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

Identified uses : Process cleaner. Cleaning In place (CIP) process
Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Ecolab Ltd.
PO Box 11; Winnington Avenue
Northwich, Cheshire, United Kingdom CW8 4DX
+ 44 (0)1606 74488
ccs@ecolab.com

1.4 Emergency telephone number

Emergency telephone number : Food & Beverage, Institutional, Agriculture, Textile Hygiene:
Northwich: +44 (0)1606 74488
Healthcare Leeds: +44 (0)113 232 2480
Healthcare Swansea: +44 (0)1235 239670
Poison Information Centre telephone number : Not Available

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Section: 2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Skin corrosion, Category 1A H314

Classification (67/548/EEC, 1999/45/EC)

C; CORROSIVE R35

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements : 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/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:
nitric acid
sulphuric 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 (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
nitric acid	7697-37-2 231-714-2 01-2119487297-23	C-O; R35-R08	Nota B Oxidizing liquids Category 3; H272 Skin corrosion Category 1A; H314	>= 10 - < 20
sulphuric acid	7664-93-9 231-639-5 01-2119458838-20	C; R35	Nota B Skin corrosion Category 1A; H314	>= 10 - < 15
Phosphoric acid	7664-38-2	C; R34	Nota B Skin corrosion	>= 5 - < 10

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	231-633-2 01-2119485924-24		Category 1B; H314	
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For the full text of the R-phrases mentioned in this Section, see Section 16.
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

- 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.
- 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.
- If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

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.
- Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

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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 get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation. Wash hands thoroughly after handling. 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.

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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 labeled containers.

Storage temperature : -20 °C to 40 °C

7.3 Specific end uses

Specific use(s) : Process cleaner. Cleaning In place (CIP) process

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
nitric acid	7697-37-2	STEL	1 ppm 2.6 mg/m3	UKCOSSTD
sulphuric acid	7664-93-9	TWA (Thoracic fraction)	0.05 mg/m3	UKCOSSTD
		TWA (Mist, thoracic fraction)	0.05 mg/m3	UKCOSSTD
Phosphoric acid	7664-38-2	TWA	1 mg/m3	UKCOSSTD
		STEL	2 mg/m3	UKCOSSTD

DNEL

nitric acid	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - local Value: 2.6 mg/m3
	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1.3 mg/m3

8.2 Exposure controls

Appropriate engineering controls

Engineering measures : 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

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Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Consult PPE manufacturer for the appropriate glove thickness (depending on the type of gloves and its intended use).
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

Respiratory protection (EN 143, 14387) : No special protective equipment required.

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 : colourless
Odour : odourless
pH : 1.0 - 1.5, 100 %
Flash point : Not applicable., Does not sustain combustion.
Odour Threshold : Not applicable and/or not determined for the mixture
Melting point/freezing point : Not applicable and/or not determined for the mixture
Initial boiling point and boiling range : 100 °C
Evaporation rate : Not applicable and/or not determined for the mixture
Flammability (solid, gas) : Not applicable and/or not determined for the mixture
Upper explosion limit : Not applicable and/or not determined for the mixture
Lower explosion limit : Not applicable and/or not determined for the mixture
Vapour pressure : Not applicable and/or not determined for the mixture
Relative vapour density : Not applicable and/or not determined for the mixture
Relative density : 1.18 - 1.22
Water solubility : soluble
Solubility in other solvents : Not applicable and/or not determined for the mixture
Partition coefficient: n-octanol/water : Not applicable and/or not determined for the mixture
Auto-ignition temperature : Not applicable and/or not determined for the mixture
Thermal decomposition : Not applicable and/or not determined for the mixture
Viscosity, kinematic : Not applicable and/or not determined for the mixture
Explosive properties : Not applicable and/or not determined for the mixture

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Oxidizing properties : Yes

9.2 Other information

Not applicable and/or not determined for the mixture

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

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

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Bases
Organic materials

10.6 Hazardous decomposition products

Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NO_x)
Sulphur 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

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.

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- 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: > 2,000 mg/kg

Components

- Acute inhalation toxicity : Phosphoric acid
4 h LC50 rat: 0.962 mg/l

Components

- Acute dermal toxicity : Phosphoric acid
LD50 rabbit: > 2,000 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

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

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Environmental Effects : This product has no known ecotoxicological effects.

Product

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 : nitric acid
96 h LC50: 72 mg/l

sulphuric acid
96 h LC50: 22 mg/l

Phosphoric acid
96 h LC50: 75.1 mg/l

12.2 Persistence and degradability

Product

Biodegradability : The surfactants contained in the product are biodegradable according to the requirements of the detergent regulation 648/2004/EC

Components

Biodegradability : nitric acid
Result: Not applicable - inorganic

sulphuric acid
Result: Not applicable - inorganic

Phosphoric acid
Result: Not applicable - inorganic

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

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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. Dispose of in accordance with local, state, and federal regulations.

European Waste Catalogue : 200114* - acids

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 : 3264
14.2 UN proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Nitric acid, Sulphuric acid)
14.3 Transport hazard class(es) : 8
14.4 Packing group : II
14.5 Environmental hazards : No
14.6 Special precautions for user : None

Air transport (IATA)

14.1 UN number : 3264
14.2 UN proper shipping name : Corrosive liquid, acidic, inorganic, n.o.s.
(Nitric acid, Sulphuric acid)
14.3 Transport hazard class(es) : 8
14.4 Packing group : II
14.5 Environmental hazards : No
14.6 Special precautions for user : None

Sea transport (IMDG/IMO)

14.1 UN number : 3264
14.2 UN proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Nitric acid, Sulphuric acid)
14.3 Transport hazard class(es) : 8
14.4 Packing group : II
14.5 Environmental hazards : No
14.6 Special precautions for user : None

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user

14.7 Transport in bulk : Not applicable.
according to Annex II of
MARPOL 73/78 and the IBC
Code

Section: 15. REGULATORY INFORMATION

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

National Regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Other regulations : The Chemicals (Hazard Information and Packaging for Supply) Regulations.
The Control of Substances Hazardous to Health Regulations.
Health and Safety at Work Act.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

Section: 16. OTHER INFORMATION

Full text of R-Phrases

R08 Contact with combustible material may cause fire.
R34 Causes burns.
R35 Causes severe burns.

Full text of H-Statements

H272 May intensify fire; oxidiser.
H314 Causes severe skin burns and eye damage.

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; 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; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; 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; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and

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Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

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.

ANNEX: EXPOSURE SCENARIOS

DPD+ Substances:

The following substances are the lead substances that contribute to the mixture Exposure Scenario according to the DPD+ Rule:

Route	Substance	CAS-No.	EINECS-No.
Ingestion	nitric acid	7697-37-2	231-714-2
Inhalation	nitric acid	7697-37-2	231-714-2
Dermal	nitric acid	7697-37-2	231-714-2
Eyes	nitric acid	7697-37-2	231-714-2
aquatic environment	No lead substance		

Physical properties DPD+ Substances:

Substance	Vapour pressure	Water solubility	Pow	Molar Mass
nitric acid	56 hPa	1,000 g/l		63.01 g/mol

To calculate if your downstream Operating Conditions and Risk management Measures are safe, please calculate your risk factor at the website below:

www.ecetoc.org/tra

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Short title of Exposure Scenario : **Process cleaner. Cleaning In place (CIP) process**

Use descriptors

- Main User Groups : Industrial uses: Uses of substances as such or in preparations at industrial sites
- Sectors of end-use : **SU3:** Industrial uses: Uses of substances as such or in preparations at industrial sites
- Process categories : **PROC1:** Use in closed process, no likelihood of exposure
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
- Product categories : **PC35:** Washing and cleaning products (including solvent based products)
- Environmental Release Categories : **ERC4:** Industrial use of processing aids in processes and products, not becoming part of articles