

**Section: 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : OPTIMUM

Other means of identification : Not applicable.

Recommended use : Heavy duty cleaner

Product dilution information : 0.15 %

Company : Ecolab New Zealand  
2 Daniel Place  
Te Rapa, Hamilton New Zealand  
+64 7 958 2319

Emergency telephone number : 0800 243 622 (0800 CHEMCALL)  
+64 7 958 2372 (International)

Issuing date : 25.05.2021

**Section: 2. HAZARDS IDENTIFICATION**
**HSNO Hazard classification**
**Product AS SOLD**

Corrosive to Metals : 8.1 A  
Skin corrosion : 8.2 B  
Serious eye damage : 8.3 A  
Aquatic toxicity (Acute or Chronic) : 9.1 D

**Product AT USE DILUTION**

Not a hazardous substance or mixture.

**GHS Label element**
**Product AS SOLD**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : May be corrosive to metals.  
Causes severe skin burns and eye damage.  
Harmful to aquatic life.

Precautionary Statements : **Prevention:**  
Keep only in original container. Do not breathe dusts or mists. Wash skin thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove

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contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Specific treatment (see supplemental first aid instructions on this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

**Storage:**

Store locked up. Store in corrosive resistant container with a resistant inner liner.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

### Product AT USE DILUTION

Precautionary Statements

: **Prevention:**

Wash hands thoroughly after handling.

**Response:**

Get medical advice/ attention if you feel unwell.

**Storage:**

Store in accordance with local regulations.

### Product AS SOLD

**Other hazards**

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

## Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Product AS SOLD

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
sulphuric acid	7664-93-9	10 - 30
Phosphoric acid	7664-38-2	10 - 30
Alcohols, C9-11, ethoxylated	68439-46-3	1 - 5

### Product AT USE DILUTION

No hazardous ingredients

## Section: 4. FIRST AID MEASURES

### Product AS SOLD

- 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. 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.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

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- Notes to physician : Treat symptomatically.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

### Product AT USE DILUTION

- In case of eye contact : Rinse with plenty of water.
- In case of skin contact : Rinse with plenty of water.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.

## Section: 5. FIREFIGHTING MEASURES

### Product AS SOLD

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : Exposure to decomposition products may be a hazard to health.
- Hazardous combustion products : Decomposition products may include the following materials:  
Carbon oxides  
Sulphur oxides  
Oxides of phosphorus
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : 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.
- Hazchem Code : 2X

## Section: 6. ACCIDENTAL RELEASE MEASURES

### Product AS SOLD

- Personal precautions, protective equipment and emergency procedures : 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.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and 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). For large spills, dike spilled material or otherwise contain material to ensure runoff does not

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reach a waterway.

### Product AT USE DILUTION

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and 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). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

## Section: 7. HANDLING AND STORAGE

### Product AS SOLD

- Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not mix with bleach or other chlorinated products – will cause chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
- Storage temperature : 0 °C to 30 °C

### Product AT USE DILUTION

- Advice on safe handling : Wash hands after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE). For personal protection see section 8.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

## Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Product AS SOLD

#### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
sulphuric acid	7664-93-9	WES-TWA	0.1 mg/m <sup>3</sup>	NZ OEL
Phosphoric acid	7664-38-2	WES-TWA	1 mg/m <sup>3</sup>	NZ OEL

- Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

- Eye protection : Safety goggles  
Face-shield

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- Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Nitrile rubber  
Unsupported neoprene  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- Respiratory protection : Refer to AS/NZS 1715 and AS/NZS 1716 for selection, use and maintenance of respiratory protective equipment as applicable.  
An acid gas cartridge may be used.  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- 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.

### Product AT USE DILUTION

- Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Personal protective equipment

- Eye protection : No special protective equipment required.
- Hand protection : No special protective equipment required.
- Skin protection : No special protective equipment required.
- Respiratory protection : Refer to AS/NZS 1715 and AS/NZS 1716 for selection, use and maintenance of respiratory protective equipment as applicable.

## Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Colour	: clear, red	colourless
Odour	: slight	odourless
pH	: 0.5 - 1.5, (100 %)	5.0 - 6.0
Flash point	: Not applicable., Does not sustain combustion.	
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)	: Not applicable.	
Upper explosion limit	: no data available	

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Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.135 - 1.147
Water solubility	: no data available
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, kinematic	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available
Molecular weight	: no data available
VOC	: no data available

### Section: 10. STABILITY AND REACTIVITY

#### Product AS SOLD

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions to avoid	: None known.
Incompatible materials	: Metals Organic materials Bases
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon oxides Sulphur oxides Oxides of phosphorus

### Section: 11. TOXICOLOGICAL INFORMATION

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

#### Potential Health Effects

#### Product AS SOLD

Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.
Ingestion	: Causes digestive tract burns.

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Inhalation : May cause nose, throat, and lung irritation.  
Chronic Exposure : Health injuries are not known or expected under normal use.

### Product AT USE DILUTION

Eyes : Health injuries are not known or expected under normal use.  
Skin : Health injuries are not known or expected under normal use.  
Ingestion : Health injuries are not known or expected under normal use.  
Inhalation : Health injuries are not known or expected under normal use.  
Chronic Exposure : Health injuries are not known or expected under normal use.

### Experience with human exposure

#### Product AS SOLD

Eye contact : Redness, Pain, Corrosion  
Skin contact : Redness, Pain, Corrosion  
Ingestion : Corrosion, Abdominal pain  
Inhalation : Respiratory irritation, Cough

### Product AT USE DILUTION

Eye contact : No symptoms known or expected.  
Skin contact : No symptoms known or expected.  
Ingestion : No symptoms known or expected.  
Inhalation : No symptoms known or expected.

### Toxicity

#### Product AS SOLD Product

Acute oral toxicity : no data available  
Acute inhalation toxicity : no data available  
Acute dermal toxicity : no data available  
Skin corrosion/irritation : no data available  
Serious eye damage/eye irritation : no data available  
Respiratory or skin sensitization : no data available  
Carcinogenicity : no data available  
Reproductive effects : no data available  
Germ cell mutagenicity : no data available  
Teratogenicity : no data available  
STOT - single exposure : no data available  
STOT - repeated exposure : no data available

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Aspiration toxicity : no data available

### Components

Acute oral toxicity : Phosphoric acid  
LD50 rat: > 2,600 mg/kg

Alcohols, C9-11, ethoxylated  
LD50 rat: 4,044 mg/kg

### Components

Acute inhalation toxicity : Phosphoric acid  
4 h LC50 rat: 0.962 mg/l  
Test atmosphere: dust/mist

### Components

Acute dermal toxicity : Phosphoric acid  
LD50 rabbit: > 2,000 mg/kg

Alcohols, C9-11, ethoxylated  
LD50 rabbit: 2,108 mg/kg

Test substance: Information given is based on data obtained from similar substances.

## Section: 12. ECOLOGICAL INFORMATION

### Toxicity

#### Product AS SOLD

Environmental Effects : Harmful to aquatic life.

#### Product AT USE DILUTION

Environmental Effects : This product has no known ecotoxicological effects.

#### Product AS SOLD

##### 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 : sulphuric acid  
96 h LC50: 22 mg/l

Alcohols, C9-11, ethoxylated  
96 h LC50 Oncorhynchus mykiss (rainbow trout): 5 mg/l

### Components

Toxicity to daphnia and other aquatic invertebrates : Phosphoric acid  
48 h EC50 Daphnia magna (Water flea): > 100 mg/l

Alcohols, C9-11, ethoxylated  
48 h EC50 Daphnia magna (Water flea): 2.5 mg/l

### Components

Toxicity to algae : Phosphoric acid



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72 h EC50 *Desmodesmus subspicatus* (green algae): > 100 mg/l

Alcohols, C9-11, ethoxylated

96 h EC50 *Pseudokirchneriella subcapitata* (algae): 1.4 mg/l

### Persistence and degradability

Readily biodegradable.

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

## Section: 13. DISPOSAL CONSIDERATIONS

### Product AS SOLD

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. 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.

Disposal considerations : 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.

### Product AT USE DILUTION

Disposal methods : Diluted product can be flushed to sanitary sewer.

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

## Section: 14. TRANSPORT INFORMATION

### Product AS SOLD

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 (NZ\_DG)

UN number : 3264  
Description of the goods : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(Phosphoric acid, Sulphuric acid)  
Class : 8  
Packing group : II  
Hazchem Code : 2X

#### Sea transport (IMDG/IMO)

UN number : 3264  
Description of the goods : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(Phosphoric acid, Sulphuric acid)  
Class : 8

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Packing group : II  
Marine pollutant : No  
Special precautions for user : None

#### Section: 15. REGULATORY INFORMATION

##### Product AS SOLD

HSNO Approval Number : HSR002526  
HSNO Group Standard : Cleaning Products (Corrosive) Group Standard 2017

The components of this product are reported in the following inventories:

##### United States TSCA Inventory :

All substances listed as active on the TSCA inventory

##### Canadian Domestic Substances List (DSL) :

This product contains one or several components listed in the Canadian NDSL.

##### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS) :

On the inventory, or in compliance with the inventory

##### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand :

On the inventory, or in compliance with the inventory

##### Japan. ENCS - Existing and New Chemical Substances Inventory :

On the inventory, or in compliance with the inventory

##### Korea. Korean Existing Chemicals Inventory (KECI) :

On the inventory, or in compliance with the inventory

##### Philippines Inventory of Chemicals and Chemical Substances (PICCS) :

On the inventory, or in compliance with the inventory

##### China Inventory of Existing Chemical Substances :

On the inventory, or in compliance with the inventory

##### Taiwan Chemical Substance Inventory :

not determined

#### Section: 16. OTHER INFORMATION

Issuing date : 25.05.2021  
Version : 1.2  
Prepared by : Regulatory Affairs

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.