

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

Product name : OPTIMUM CONCENTRATE

Other means of identification : Not applicable.

Recommended use : Cleaning product

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.075 % - 0.075 %

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 : 15.10.2024

**Section: 2. HAZARDS IDENTIFICATION**
**GHS Classification**
**Product AS SOLD**

Corrosive to metals : Category 1

Acute toxicity (Oral) : Category 4

Skin corrosion/irritation : Category 1C

Serious eye damage/eye irritation : Category 1

Specific target organ toxicity - repeated exposure (Oral) : Category 2 (Kidney)

**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.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**  
Keep only in original packaging. Do not breathe mist or vapours.  
Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye

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protection/ face protection/ hearing protection.

**Response:**

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Get medical advice/ attention if you feel unwell. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

**Storage:**

Store locked up. Store in a corrosion 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: (%)
Phosphoric acid	7664-38-2	10 - 30
sulphuric acid	7664-93-9	5 - 10
Octyl Phosphonic Acid	4724-48-5	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

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	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.
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.
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- 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). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not 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). Flush away traces with water. 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 away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
- Storage temperature : 0 °C to 45 °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
Phosphoric acid	7664-38-2	WES-TWA	1 mg/m <sup>3</sup>	NZ OEL
sulphuric acid	7664-93-9	WES-TWA	0.1 mg/m <sup>3</sup>	NZ OEL

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

#### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

butyl-rubber  
Nitrile rubber  
Unsupported neoprene

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.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Acidic gas/vapour type

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.  
No personal respiratory protective equipment normally required.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Colour	: clear, light red	colourless
Odour	: slight	slight

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### OPTIMUM CONCENTRATE

pH	: 2.0, (100 %)	2.0 - 4.0
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	: > 100 °C	
Evaporation rate	: no data available	
Flammability (solid, gas)	: Not applicable.	
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	: 1.24 - 1.27	
Water solubility	: soluble	
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	: The substance or mixture is not classified as oxidizing.	
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	: Bases Metals
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

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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 : Harmful if swallowed. Causes digestive tract burns.

Inhalation : May cause nose, throat, and lung irritation.

Chronic Exposure : May cause damage to organs through prolonged or repeated exposure.

##### 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 : Acute toxicity estimate : 1,774 mg/kg

Acute inhalation toxicity : 4 h Acute toxicity estimate : > 20 mg/l  
Test atmosphere: vapour

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

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Serious eye damage/eye irritation	: no data available
Respiratory or skin sensitization	: no data available
Carcinogenicity	: Not classifiable as a human carcinogen.
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
Aspiration toxicity	: no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Toxicity

##### Product AS SOLD

Environmental Effects : This product has no known ecotoxicological effects.

##### 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

##### Components

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

##### Components

Toxicity to algae : Phosphoric acid  
72 h EC50 Desmodesmus subspicatus (green algae): > 100 mg/l  
  
Octyl Phosphonic Acid  
72 h EC50: 40 mg/l

##### Persistence and degradability

Readily biodegradable.

##### Bioaccumulative potential

no data available

##### Mobility in soil



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### OPTIMUM CONCENTRATE

no data available

#### Other adverse effects

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

#### Product AS SOLD

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations. Dispose of in accordance with local and national regulations.

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  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(Phosphoric acid, Sulphuric acid)  
Class : 8  
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 2020

# SAFETY DATA SHEET

## OPTIMUM CONCENTRATE

### **Tolerable Exposure Limits (TEL)**

Not applicable.

### **Environmental Exposure Limits (EEL)**

Not applicable.

**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 : 15.10.2024  
Version : 2.0  
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.