

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : OPTIMUM 2 HF

Other means of identification : Not applicable.

Recommended use : Heavy duty cleaner

Product dilution information : 0.15 % - 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 : 16.04.2024

Section: 2. HAZARDS IDENTIFICATION
GHS Classification
Product AS SOLD

Corrosive to metals : Category 1
Skin corrosion/irritation : Category 1C
Serious eye damage/eye irritation : Category 1

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.

Precautionary Statements : **Prevention:**
Keep only in original packaging. Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
Response:
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.

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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: (%)
sulphuric acid	7664-93-9	10 - 30
Phosphoric acid	7664-38-2	10 - 30
Alcohol (C10), ethoxylated, propoxylated polymer		1 - 5
sulphamic acid	5329-14-6	1 - 5
Propylene glycol	57-55-6	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.
- Notes to physician : Treat symptomatically.

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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
nitrogen oxides (NOx)
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). Flush away traces with water. For large spills, dike spilled material or otherwise contain

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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 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 ³	NZ OEL
Phosphoric acid	7664-38-2	WES-TWA	1 mg/m ³	NZ OEL
Propylene glycol	57-55-6	WES-TWA (Particulate.)	10 mg/m ³	NZ OEL
		WES-TWA (Vapour and particulates)	150 ppm 474 mg/m ³	NZ OEL

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

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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.
- Multi-purpose combination filter
- 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, red	colourless
Odour	: slight	odourless
pH	: 1.5, (100 %)	5.0 - 6.0
Flash point	: Not applicable., Does not sustain combustion.	

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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
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.15 - 1.16
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	: 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	: Bases Metals
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

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

Product AS SOLD

- 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.

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 : > 2,000 mg/kg
- Acute inhalation toxicity : no data available
- Acute dermal toxicity : no data available
- Skin corrosion/irritation : no data available

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Propylene glycol
48 h EC50 Aquatic Invertebrate: 18,340 mg/l

Components

Toxicity to algae : Phosphoric acid
72 h EC50 Desmodesmus subspicatus (green algae): > 100 mg/l
sulphamic acid
72 h EC50 algae: 48 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 : Do not contaminate storm water drains, natural waterways or soil with chemical or used container. 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, sulphamic acid)
Class : 8
Packing group : III
Hazchem Code : 2X

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Sea transport (IMDG/IMO)

UN number : 3264
Proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Phosphoric acid, sulphamic acid)
Class : 8
Packing group : III
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

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 :

not determined

Canadian Domestic Substances List (DSL) :

This product contains one or several components that are not on the Canadian DSL nor NDSL.

Australia. Australian Industrial Chemicals Introduction Scheme (AICIS) :

not determined

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 :

not determined

Korea. Korean Existing Chemicals Inventory (KECI) :

not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :

not determined

China Inventory of Existing Chemical Substances :

not determined

Taiwan Chemical Substance Inventory :

not determined

Section: 16. OTHER INFORMATION

Issuing date : 16.04.2024

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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.