

SAFETY DATA SHEET

PRO-OXINE AH

Infosafe No.: LQB8B
ISSUED Date : 04/07/2022
ISSUED by: Kemin Industries (NZ) Ltd

Section 1 - Identification

Product Identifier

PRO-OXINE AH

Product Code

018486

Company Name

Kemin Industries (NZ) Ltd

Address

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Recommended uses and any restrictions on use or supply

Antimicrobial pesticide

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture

Classified as Hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020, New Zealand.

Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2020 Transport of Dangerous Goods on Land.

Acute inhalation toxicity: Category 4

Acute oral toxicity: Category 4

Corrosive to metals: Category 1

Reproductive toxicity: Category 1

Specific target organ toxicity – repeated exposure: Category 2

Hazardous to the aquatic environment acute Category 1

Hazardous to the aquatic environment chronic Category 1

Signal Word (s)

DANGER

Hazard Statement (s)

H290 May be corrosive to metals

H302 Harmful if swallowed

H332 Harmful if inhaled

H360 May damage fertility or the unborn child

H373 May cause damage to organs (blood) through prolonged or repeated exposure

H410 Very toxic to aquatic life with long lasting effects

Pictogram (s)

Exclamation mark, Corrosion, Health hazard, Environment



Precautionary Statement – Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P234 Keep only in original packaging.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.

Precautionary Statement – Response

- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P390 Absorb spillage to prevent material damage.
- P391 Collect spillage.

Precautionary Statement – Storage

- P405 Store locked up.
- P406 Store in a corrosion resistant container with a resistant inner liner.

Precautionary Statement – Disposal

- P501 Dispose of contents/container to an approved waste disposal plant.

Other Information

Chlorine dioxide vapors are emitted when this product contacts acids or chlorine.
 Directions for use for this product typically require its activation by mixing with GRAS (generally regarded as safe) acids.

Section 3 - Composition and Information on Ingredients

Chemical Characterization

Liquid

Ingredients

Name	CAS	Proportion
Sodium chlorite	7758-19-2	8.35 %
Deionised water	7732-18-5	<=91.65 %

Section 4 - First Aid Measures

Inhalation

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin

Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First-aid Facilities

Eye wash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (0800 764 766) or a doctor at once.

Section 5 - Firefighting Measures

Suitable Extinguishing Media

Water is the preferred extinguishing media when it is compatible with the burning substance. If water is not compatible, use dry powder extinguisher.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes and gases including hydrogen chloride gas (HCl) and oxides of sodium (NaOx).

Specific hazards arising from the chemical

Substance does not burn but supports the combustion of flammable substances through the liberation of oxygen.

Hazchem Code

2X

Decomposition Temperature

Not available

Precautions in connection with fire

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) and full protective clothing to prevent exposure to vapours, fumes or products of combustion. Water spray may be used to cool down heat-exposed containers.

Section 6 - Accidental Release Measures

Emergency Procedures

Evacuate all unprotected personnel. Do not allow contact with skin and eyes. Do not breathe mist/vapour. It is essential to wear self-contained breathing apparatus (S.C.B.A) and full personal protective equipment and clothing to prevent exposure. Avoid exposure to spillage by collecting the material using vacuum and transfer into suitable labelled containers for subsequent recycling or disposal. As a water based product, if spilt on electrical equipment the product will cause short-circuits. Dispose of waste according to applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

Spillage should be neutralized using any one of the three neutralizers: i) sodium sulfite, ii) sodium bisulfite, or iii) sodium thiosulfate.

The neutralization reaction can be extremely exothermic, and therefore, care should be taken to add the neutralizer in small increments. The contained solution should be first diluted with a volume of water that is approximately four times the volume of the contained spill. Sodium sulfite is the most preferred (least exothermic) neutralizer that can be used in the ratio of 252 g/L of spilled material. Sodium thiosulfate anhydrous salt can be used in the ratio of 600 g/L or pentahydrate salt 923 g/L of the spilled material. The neutralized solution can then be flushed to a designated and permitted sewer system with double the amount of water. The product that is not neutralized may be disposed of as chemical waste in the manner indicated below. The vicinity of the spill should be thoroughly flushed with water after clean-up. At no time should the spilled material be allowed to dry to a crystalline salt. Do not discharge this product to storm drains or to any surface or groundwater source. If the neutralizer is not available, volumes larger than 45 litres should be carefully transferred into a container and taken to an authorized chemical disposal site.

Section 7 - Handling and Storage

Precautions for Safe Handling

Corrosive liquid. Attacks skin and eyes. Causes burns. Wear suitable protective clothing, gloves and eye/face protection when mixing and using. Use in designated areas with adequate ventilation. Avoid breathing in vapours, mist or fumes. Keep containers closed when not in use. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood. It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.

Conditions for safe storage, including any incompatibilities

Corrosive liquid. Store in a cool dry well-ventilated area. Store away from oxidising agents and bases/acids. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Provide a catch-tank in a bunded area. Store in original packages as approved by manufacturer. Ensure that storage conditions comply with applicable local and national regulations. Protect from freezing.

For information on the design of the storeroom, reference should be made to Australian Standard AS 3780: The storage and handling of corrosive substances. Reference should also be made to all State and Federal regulations.

Store away from acids, chlorine and chlorine compounds, hypochlorite (bleach), organic solvents, sulfur and sulfite compounds, phosphorus, combustible/flammable materials, and direct sunlight.

Corrosiveness

May be corrosive to metals.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL)

No exposure standards have been established for this material, however reaction with acids causes liberation of chlorine dioxide. Available exposure limits for chlorine dioxide is listed below:

TWA: 0.1 ppm, 0.28 mg/m³

STEL : 0.3 ppm, 0.83 mg/m³

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

Source: Workplace Exposure Standards and Biological Exposure Indices.

Biological Limit Values

No biological limits allocated.

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

For applications where activated product is used in confined space or has the potential for exposure to chlorine dioxide to the worker, such as in a fogging or spraying application, respiratory protection is required.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337(series) - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Thermal Hazards

No further relevant information available.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Long sleeved clothing. Chemical resistant apron is recommended where large quantities are handled.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Liquid	Appearance	Clear to pale yellow liquid
Colour	Clear to pale yellow	Odour	Slight odor of chlorine
Decomposition Temperature	Not available	Freezing Point	-3.78°C
Boiling Point	105°C	Solubility in Water	Miscible
pH	8.5–9.0	Vapour Pressure	23.7 mm Hg (25°C)
Vapour Density (Air=1)	0.02 kg/m ³	Evaporation Rate	Comparable to water
Odour Threshold	Not available	Viscosity	0.6409 mm ² / sec
Partition Coefficient: n-octanol/water	Not available	Density	1.065-1.095 g/ml (20°C)
Flash Point	Not applicable	Flammability	Not flammable
Auto-Ignition Temperature	Not available	Flammable Limits - Lower	Not available
Flammable Limits - Upper	Not available		

Section 10 - Stability and Reactivity

Reactivity

Not reactive under normal temperatures and pressures.

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition, evaporation to dryness, contamination with foreign materials, exposure to sunlight or ultraviolet light. Dried material can ignite upon contact with combustibles.

Incompatible Materials

Acids, Reducing agents, Combustible material, Oxidizing agents, Hypochlorite, Organic solvents and compounds, Garbage, Dirt, Organic materials, Household products, Chemicals, Soap products, Paint products, Vinegar, Beverages, Oils, Pine oil, Dirty rags, Sulfur-containing rubber, or any other foreign matter.

Hazardous Decomposition Products

Under fire conditions this product may emit toxic and/or irritating fumes and gases including hydrogen chloride gas (HCl) and oxides of sodium (NaOx).

Possibility of hazardous reactions

Contact with acids or chlorine can result in the evolution of chlorine dioxide gas (ClO₂).

Section 11 - Toxicological Information

Toxicology Information

Toxicity data for product is given below.

Acute Toxicity - Oral

LD50 (rat): > 500 mg/kg - < 5050 mg/kg

Acute Toxicity - Inhalation

LC50(rat) : >3.10 mg/l/4h (aerosol)

Acute Toxicity - Dermal

LD50 (rabbit) : >5,050 mg/kg

Ingestion

Harmful if swallowed. Ingestion of this product may cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation

Harmful if inhaled. Inhalation of product vapours can cause irritation of the nose, throat and respiratory system.

Skin

May be irritating to skin. The symptoms may include redness, itching and swelling.

Eye

May be irritating to eyes. The symptoms may include redness, itching and tearing. May cause mild, reversible eye irritation but no non-reversible effects.

Respiratory Sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ Cell Mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Sodium chlorite is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).

Reproductive Toxicity

May damage fertility or the unborn child. Classified as a Known or presumed human reproductive or developmental toxicant.

STOT - Single Exposure

Not expected to cause toxicity to a specific target organ.

STOT - Repeated Exposure

May cause damage to organs (blood) through prolonged or repeated exposure by ingestion.

Aspiration Hazard

Not expected to be an aspiration hazard.

Section 12 - Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects. Toxic to fish and aquatic invertebrates, oysters and shrimp.

Persistence and degradability

Product is biodegradable.

Mobility

Product does not migrate in soil.

Bioaccumulative Potential

Product does not bio-accumulate.

Other Adverse Effects

Not available

Environmental Protection

Do not discharge this material into waterways, drains and sewers.

Hazardous to the Ozone Layer

This product is not expected to deplete the ozone layer.

Section 13 - Disposal Considerations

Disposal Considerations

Product Disposal:

Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. In this specific case the product is water-based/water-soluble and therefore can be sent through a Waste Water Treatment Plant and after treatment can be discharged into environment through the sewerage or drainage systems as authorized.

Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed. Do not dispose into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected.

In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Notice (2017). Further details regarding disposal can be obtained on the EPA New Zealand website under specific group standards.

Container Disposal:

Do not reuse or refill this container. Offer for recycling if available. Offer for reconditioning if appropriate. Triple rinse container, or equivalent, promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this process two more times.

The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service.

In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

Section 14 - Transport Information

Transport Information

Road and Rail Transport (NZ):

This material is classified as Dangerous Goods Class 8 Corrosive Substances

Must not be loaded in the same freight container or on the same vehicle with:

- Class 1: Explosives
- Division 5.1: Oxidising substances
- Division 5.2: Organic peroxides

Class 7: Radioactive materials unless specifically exempted

-Food items.

Note 1: Cyanides (Division 6.1) must not be loaded in the same freight container or on the same vehicle with acids (Class 8).

Note 2: Strong acids must not be loaded in the same freight container or on the same vehicle with strong alkalis. Packing Group I and II acids and alkalis should be considered as strong.

Must not be loaded with in the same freight container; and on the same vehicle must be separated horizontally by at least 3 metres unless all but one are packed in separate freight containers with:

- Division 4.3: Dangerous when wet Substances

Goods of packing group II or III may be loaded in the same freight container or on the same vehicle if transported in segregation devices with:

- Division 4.3: Dangerous when wet substances
- Division 5.1: Oxidising substances
- Division 5.2: Organic peroxides
- Food items.

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Class/Division: 8

UN No: 1908

Proper Shipping Name: CHLORITE SOLUTION (Sodium chlorite) (MARINE POLLUTANT)

Packing Group: II I

EMS : F-A, S-B

Special Provisions: 223, 274 , 352

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Class/Division: 8

UN No: 1908

Proper Shipping Name: Chlorite solution

Packing Group: II I

Packaging Instructions (passenger & cargo): 851, 852

Packaging Instructions (cargo only): 855,856

Hazard Label: Corrosive

Special Provisions: A3, A803

UN Number

1908

Proper Shipping Name

CHLORITE SOLUTION

Hazard Class

8

Hazchem Code

2X

Special Precautions for User

Not available

Packing Group

III

IERG Number

37D

IMDG Marine pollutant

Yes

Transport in Bulk

Not applicable

Section 15 - Regulatory Information

Regulatory Information

Classified as Hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020, New Zealand.

Group Standard: Cleaning Products (Corrosive) Group Standard 2020.

HSNO Approval Number

HSR002526

Tolerable exposure limit (TEL)

Not available

Environmental exposure limit (EEL)

Not available

Certified Handler

Not available

Tracking

Not available

Controlled Substance Licence Requirements

Not available

Montreal Protocol

Not listed

Stockholm Convention

Not listed

Rotterdam Convention

Not listed

Agricultural Compounds, including Veterinary Medicines (ACVM)

Not available

Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS

SDS created: July 2022

Literature References

Hazardous Substances and New Organisms Act (1996).

Health and Safety at Work (Hazardous Substances) Regulations {2017}.

Workplace Exposure Standards and Biological Exposure Indices.

Agricultural Compounds and Veterinary Medicines Act (1997).

Montreal Protocol on Substances that Deplete the Ozone Layer.

Stockholm Convention on Persistent Organic Pollutants (POPs).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

Transport of Dangerous goods on land NZS 5433.

Recommendations on the Transport of Dangerous Goods - Model Regulations.

Dangerous Goods Emergency Action Code List.

Hazardous Substances (Safety Data Sheets) Notice (2017). (EPA Consolidation)

Assigning a hazardous substance to a group standard.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

END OF SDS

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