

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: NITRIC ACID 60-64%

Recommended Use of the Chemical and Restrictions on Use CIP (cleaning in process) acid for the cleaning of all stainless steel processing equipment in the dairy industry.

Supplier: Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700
Facsimile: +64 9 368 2710
Emergency Telephone: 0 800 734 607 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

SIGNAL WORD: DANGER

Subclasses:

Subclass 6.1 Category D - Substances which are acutely toxic.
Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.
Subclass 8.1 Category A - Substances that are corrosive to metals.
Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.
Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.

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



Hazard Statement(s):

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.
P234 Keep only in original container.
P260 Do not breathe mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Product Name: NITRIC ACID 60-64%
Substance No: 000000018999

Issued: 29/05/2019
Version: 5

Safety Data Sheet



Response:

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363 Wash contaminated clothing before re-use.

P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

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 or doctor/physician.

P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).

P390 Absorb spillage to prevent material damage.

Storage:

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

Disposal:

P501 In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Nitric acid	7697-37-2	60-64%	H272 H290 H314
Water	7732-18-5	36-40%	-

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discoloration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Safety Data Sheet



Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Can cause corneal burns. Material is strongly acidic and corrosive.

Effects from exposure to decomposition products including nitrogen dioxide (possible decomposition component) can include chest discomfort, shortness of breath and possible pulmonary oedema, the onset of which may be delayed. The exposed person should be kept under medical surveillance for 24 hours for delayed onset of pulmonary oedema.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2R

Specific hazards arising from the chemical:

Corrosive substance.

Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes, including those of oxides of nitrogen. Brown fumes indicate the presence of toxic oxides of nitrogen. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. Increase ventilation. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Neutralise residues with lime or soda ash. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children. Always add the acid to water, never the reverse.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Standards: No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s) and decomposition product(s):

Nitric acid: WES-TWA 2 ppm, 5.2 mg/m³; WES-STEL 4 ppm, 10 mg/m³

Nitrogen dioxide: WES-TWA 3 ppm, 5.6 mg/m³; WES-STEL 5 ppm, 9.4 mg/m³

Safety Data Sheet



As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

WES - STEL (Workplace Exposure Standard - Short Term Exposure Limits) - The 15 minute average exposure standard. Applies to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight-hour, time-weighted average exposures should be determined.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



Wear overalls, chemical goggles, face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Clear Liquid
Colour:	Pale Yellow
Odour:	Strong, Pungent
Solubility:	Miscible with water.
Specific Gravity:	1.37-1.39 @20°C
Relative Vapour Density (air=1):	Not available

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Safety Data Sheet



Vapour Pressure (20 °C):	Not available
Flash Point (°C):	Not applicable
Flammability Limits (%):	Not applicable
Autoignition Temperature (°C):	Not applicable
Boiling Point/Range (°C):	ca. 86
pH:	ca. 1
Viscosity:	ca. 2 cP @20°C
Freezing Point/Range (°C):	-34 (60% solution)

10. STABILITY AND REACTIVITY

Reactivity:	Reacts violently with alkalis. Hygroscopic: absorbs moisture or water from surrounding air.
Chemical stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions:	Reacts with metals liberating flammable hydrogen gas. May cause fire in contact with organic materials such as wood, cotton or straw, evolving toxic nitrogen oxides gases (brown fumes). Reacts vigorously with alkalis evolving heat. Hazardous polymerisation will not occur.
Conditions to avoid:	Avoid exposure to direct sunlight. Darkens on exposure to sunlight due to nitrogen dioxide formation, an irritating toxic brown gas. Avoid exposure to heat, sources of ignition, and open flame. Avoid contact with combustible chemicals. Avoid contact with alkalis.
Incompatible materials:	Incompatible with organic chemicals, strong alkalis, reducing agents, carbides, chlorates, combustible materials, oxidising agents, metals.
Hazardous decomposition products:	Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Eye contact:	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.
Skin contact:	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
Inhalation:	Breathing in mists or aerosols may produce respiratory irritation. Nitric acid may decompose to a toxic brown gas of nitrogen dioxide. Inhalation of the gas may result in chest discomfort, shortness of breath and possible pulmonary oedema, the onset of which may be delayed.

Acute toxicity: No LD50 data available for the product.

Safety Data Sheet



Chronic effects: Chronic overexposure to vapour, fumes or aerosols may produce adverse effects on the lungs and erosion of the teeth.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.



UN No: 2031
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: NITRIC ACID
Hazchem or Emergency Action Code: 2R

Marine Transport

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

UN No: 2031
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: NITRIC ACID

IMDG EMS Fire: F-A
IMDG EMS Spill: S-B

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS. TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in Passenger and Cargo Aircraft; may be transported by Cargo Aircraft Only.

UN No: 2031
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: NITRIC ACID

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15. REGULATORY INFORMATION

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Subclasses:

Subclass 6.1 Category D - Substances which are acutely toxic.

Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.

Subclass 8.1 Category A - Substances that are corrosive to metals.

Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.

Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.

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Hazard Statement(s):

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H314 Causes severe skin burns and eye damage.

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16. OTHER INFORMATION

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:

Change in First Aid Measures

Change in Fire Management Requirements

Change in Handling & Storage Requirements

Change in Exposure Controls

Change in Stability and Reactivity

Update in Toxicological Information

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.