SAFETY DATA SHEET



Revision date: 21-Mar-2022

Revision Number 6

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name NITRIC ACID 69% (NZ)

Product Code(s) 00000050052

Other means of identification

UN number 2031

Recommended use of the chemical and restrictions on use

Recommended use CIP (cleaning in process) acid for cleaning of stainless steel processing equipment in the

dairy/food industry.

Uses advised against No information available.

Details of the supplier of the safety data sheet

Supplier

Ixom Operations Pty Ltd (Incorporated in Australia) NZBN: 9429041465226 Address: 166 Totara Street

Mt Maunganui South

New Zealand

Telephone Number: +64 9 368 2700

Facimile: +64 9 368 2710

For further information, please contact

Contact Point Product Safety Department

Emergency telephone number

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 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

SIGNAL WORD

Danger

Additives, Process Chemicals and Raw Materials (Acutely Toxic, Corrosive) Group Standard 2020 Approval Number: HSR002510

Oxidizing liquids	Category 3
Corrosive to metals	Category 1

Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Label elements



Hazard statements

H272 - May intensify fire; oxidizer

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 Statements - Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep/Store away from clothing/ combustible materials

Take any precaution to avoid mixing with combustibles

Keep only in original container

Do not breathe fume, gas, mist, vapours, spray

Wear respiratory protection

Wash face, hands and any exposed skin thoroughly after handling

Use only outdoors or in a well-ventilated area

Wear protective gloves / protective clothing / eye protection / face protection

Precautionary Statements - Response

Get medical advice/attention if you feel unwell

Specific treatment is urgent (see First aid on this SDS)

Immediately call a POISON CENTER or doctor/physician

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

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

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Store in corrosive resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

Corrosive to the respiratory tract

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS No.	Weight-%
Nitric acid	7697-37-2	69
Non hazardous component(s)	-	to 100

4. FIRST AID MEASURES

Description of first aid measures

General advice For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New

Zealand 0800 764 766) or a doctor. Immediate medical attention is required. Show this

safety data sheet to the doctor in attendance.

Emergency telephone number Poisons Information Center, New Zealand: 0800 764 766

Poisons Information Center, Australia: 13 11 26

Inhalation Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If

breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper

respiratory medical device.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing. Immediate medical attention is required.

Skin contact IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water

before removing clothes. IF ON SKIN: Wash with plenty of soap and water. Seek immediate

medical attention/advice. Wash contaminated clothing before reuse.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person. Get immediate medical

advice/attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Use personal protective equipment as required. Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other

proper respiratory medical device. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. May cause blindness.

Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.

Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Can cause corneal burns. 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

Suitable Extinguishing Media Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical

Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Oxidizer. These substances will accelerate burning when involved in a fire. May ignite combustibles (wood paper, oil, clothing, etc.). Runoff may create fire or explosion hazard. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters

Oxidizer. May ignite combustibles (wood paper, oil, clothing, etc.). Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

Hazchem code 2R

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Attention! Corrosive material. Avoid contact with skin, eves, and clothing. Do not breathe **Personal precautions**

> vapor or mist. Ensure adequate ventilation, Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk. Use

personal protective equipment as required. See section 8 for more information.

Other information Keep combustibles (wood, paper, oil, etc) away from spilled material. DO NOT GET

WATER INSIDE CONTAINERS. Ventilate the area. Refer to protective measures listed in

Sections 7 and 8.

Use personal protection recommended in Section 8. For emergency responders

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Prevent product from **Environmental precautions**

> entering drains. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not

allow to enter into soil/subsoil.

Methods and material for containment and cleaning up

Dike far ahead of spill; use dry sand to contain the flow of material. Absorb or cover with Methods for containment

dry earth, sand or other non-combustible material and transfer to containers. Stop leak if

you can do it without risk.

Use a non-combustible material like vermiculite, sand or earth to soak up the product and Methods for cleaning up

place into a container for later disposal. With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. After cleaning, flush away

traces with water. Prevent product from entering drains.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Do not eat, drink

or smoke when using this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse. In case of insufficient ventilation, wear suitable respiratory equipment. Use personal protection equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. When diluting, always add the product to water.

Never add water to the product.

General hygiene considerations Contaminated work clothing should not be allowed out of the workplace. Regular cleaning

of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Do not

breathe vapor or mist. Wear suitable gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly

labelled containers. Keep out of the reach of children. Store locked up. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store in accordance with local regulations. Store in accordance with the particular national

regulations.

Incompatible materials Combustible material. Organic material. Alkalis. Carbides. Chlorates. Reducing agents.

Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits No value assigned for this specific material by the New Zealand Workplace Health & Safety

Authority. However, Workplace Exposure Standard(s) for constituent(s):

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

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

Engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location. Ventilation systems. Apply technical measures to comply with the occupational exposure limits.

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

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, RUBBER BOOTS, AIR MASK, GLOVES (Long), APRON.

NOTE: Chemical goggles and face shield are not required if wearing an air-supplied mask.



Eye/face protection Tight sealing safety goggles. If splashes are likely to occur:. Face protection shield.

Hand protection Elbow-length impervious gloves.

Skin and body protection Rubber boots. Long sleeved clothing. Wear fire/flame resistant/retardant clothing. Chemical

resistant apron. Overalls.

Respiratory protection If determined by a risk assessment an inhalation risk exists, wear an air supplied respirator

meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical stateLiquidAppearanceClearColorPale YellowOdorSharp Irritating

Odor threshold No information available.

Property Values Remarks • Method

pH <1
Melting point / freezing point -34°C

Boiling point / boiling range No data available Flash point Not applicable

Evaporation rateNo data availableNone knownFlammability (solid, gas)No data availableNone knownFlammability Limit in AirNone known

Upper flammability or explosive Not applicable

limits

Lower flammability or explosive Not applicable

limits

Vapor pressureNo data availableNone knownVapor densityNo data availableNone known

Relative density

Ca. 1.41 @ 20°C

Water solubility

Solubility(ies)

Partition coefficient

No data available

Solubility(ies)No data availableNone knownPartition coefficientNo data availableNone known

Autoignition temperatureNo data availableDecomposition temperatureNo data available

Kinematic viscosityNo data availableNone knownDynamic viscosity2 cP @20°C

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Reacts with alkalis. Oxidizer.

Chemical stability

Stability May cause fire or explosion; strong oxidizer. Decomposes on exposure to light.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.

Possibility of hazardous reactions Nitric acid 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

None known

(brown fumes). Reacts vigorously with alkalis evolving heat.

Conditions to avoid

Conditions to avoid Heat, flames and sparks. Exposure to air. Exposure to light.

Incompatible materials

Incompatible materials Combustible material. Organic material. Alkalis. Carbides. Chlorates. Reducing agents.

Metals.

Hazardous decomposition products

Hazardous decomposition products Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this

Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the

chemical is mishandled and overexposure occurs are:

Inhalation Harmful by inhalation. Corrosive to the respiratory tract. Inhaled corrosive substances can

lead to a toxic edema of the lungs. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased

blood pressure, and increased heart rate. Pulmonary edema can be fatal.

Eye contact Causes serious eye damage. Corrosive to the eyes and may cause severe damage

including blindness. May cause irreversible damage to eyes.

Skin contact Causes severe burns.

Ingestion Can burn mouth, throat, and stomach. Large exposures may be fatal.

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. May cause blindness.

Coughing and/ or wheezing. Difficulty in breathing.

Acute toxicity

Numerical measures of toxicity

ATEmix (inhalation-vapor) ca. 2.69 mg/L

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes severe burns. Classification is based on mixture calculation methods based on

component data.

Serious eye damage/eye irritation Causes serious eye damage. Classification is based on mixture calculation methods based

on component data.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure Corrosive to the respiratory tract.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

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

Keep out of waterways. **Ecotoxicity**

Terrestrial ecotoxicity There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Nitric acid	-	LC50: =72mg/L (96h, Gambusia	-
		affinis)	

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Mobility

Mobility in soil No information available.

Component Information

Chemical name	Partition coefficient
Nitric acid	-2.3

Other adverse effects

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products

Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020. Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste. Class 6 and 8 chemicals may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the tolerable exposure limit. If there is not tolerable exposure limit for the substance, then it may only be discharged into the environment if the substance is very rapidly converted to substances that are not hazardous substances.

Contaminated packaging

For packages that have been in direct contact with hazardous chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the chemical that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical).

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on

Land; DANGEROUS GOODS.

UN number 2031

Proper shipping name NITRIC ACID

Hazard class8Subsidiary hazard class5.1Packing groupIIHazchem code2R

IATA 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 number 2031

UN proper shipping name NITRIC ACID

Transport hazard class(es) 8
Subsidiary hazard class 5.1
Packing group II

IMDG Classified as Dangerous Goods by the criteria of the International Maritime Dangerous

Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number 2031

UN proper shipping name NITRIC ACID

Transport hazard class(es) 8
Subsidiary hazard class 5.1
Packing group II
IMDG EMS Fire F-A
IMDG EMS Spill S-Q
Marine pollutant No

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

New Zealand

National regulations See section 8 for national exposure control parameters

International Inventories

NZIoCAll the constituents of this material are listed on the New Zealand Inventory of Chemicals.

TSCA

Contact supplier for inventory compliance status.

All the constituents of this material are listed on the Australian Inventory of Industrial

Chemicals.

Legend:

NZIoC - New Zealand Inventory of Chemicals

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Prepared By This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and

SDS Services).

Issuing Date: 21-Mar-2022

Revised Primary SDS Reason(s) For Issue:

Change in Hazardous Chemical Classification

Revision Note:

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA (time-weighted average) STEL (Short Term Exposure Limit) TWA STEL

Ceiling Maximum limit value Skin designation

Carcinogen

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian Industrial Chemicals Introduction Scheme (AICIS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

RTECS (Registry of Toxic Effects of Chemical Substances)

World Health Organization

Disclaimer

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.

End of Safety Data Sheet