

SAFETY DATA SHEET



Revision date: 15-Sep-2021

Revision Number 2

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name NITRIC ACID 1-10%

Product Code(s) 000000053716

Other means of identification

UN number 2031

Recommended use of the chemical and restrictions on use

Recommended use General chemical.

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

Approval Code: HSR001579

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Label elements**Hazard statements**

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

Precautionary Statements - Prevention

Keep only in original container

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

Wash hands and face thoroughly after handling

Use only outdoors or in a well-ventilated area

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

Precautionary Statements - Response

Specific treatment (see First aid on this SDS)

Get medical advice/attention if you feel unwell

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

Get immediate medical advice/attention

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

Do not breathe vapor or mist

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Absorb spillage to prevent material damage

Precautionary Statements - Storage

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Chemical name	CAS No.	Weight-%
Nitric acid	7697-37-2	1-10
Non hazardous component(s)	-	to 100

4. FIRST AID MEASURES**Description of first aid measures****General advice**

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 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. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical advice/attention.
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. Get immediate medical advice/attention.
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. Wash contaminated clothing before reuse. Get immediate medical advice/attention.
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. 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. Avoid contact with skin, eyes, and clothing. 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.

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. 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. The product causes burns of eyes, skin and mucous membranes.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk.

Hazchem code 2R

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Attention! Corrosive material. Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. 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. Wash thoroughly after handling. See section 8 for more information.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. Do not allow to enter into soil/subsoil.

Methods and material for containment and cleaning up

Methods for containment Dike far ahead of spill; use dry sand to contain the flow of material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Stop leak if you can do it without risk.

Methods for cleaning up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. 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 Use personal protection equipment. Avoid contact with skin, eyes, and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapor or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash before reuse.

General hygiene considerations Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. 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. Store locked up. Keep out of the reach of children. Keep container closed when not in use.
Incompatible materials	Strong alkalis. 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. 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, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



Eye/face protection	Goggles. Face protection shield.
Hand protection	Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Boots. Overalls.
Respiratory protection	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.
Environmental exposure controls	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	Colourless
Odor	Characteristic
Odor threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / freezing point	No data available	
Boiling point / boiling range	No data available	
Flash point	Not applicable	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	ca. 1-1.05	
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Corrosive to metals.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

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

Conditions to avoid

Conditions to avoid Contact with foodstuffs.

Incompatible materials

Incompatible materials Strong alkalis. 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 May cause irritation.

Eye contact Causes serious eye damage.

Skin contact Causes burns.

Ingestion Can burn mouth, throat, and stomach.

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

Acute toxicity

Numerical measures of toxicity
No information available.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric acid	-	-	= 2500 ppm (Rat) 1 h = 130

			mg/m ³ (Rat) 4 h
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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 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 Legend	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
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. Acid mists, strong inorganic: Classified by the International Agency for Research on Cancer (IARC) as a Group 1. Group 1 - The agent is carcinogenic to humans.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity	Keep out of waterways.
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.
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Bioaccumulative potential

Bioaccumulation	No information available.
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Mobility

Mobility in soil	No information available.
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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

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). Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 SOLUTION
Hazard class 8
Packing group II
Hazchem code 2R

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 SOLUTION
Transport hazard class(es) 8
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 SOLUTION
Transport hazard class(es) 8
Packing group II
IMDG EMS Fire F-A
IMDG EMS Spill S-B

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**

NZIoC	All the constituents of this material are listed on the New Zealand Inventory of Chemicals.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.

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
- 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:** 15-Sep-2021**Reason(s) For Issue:** Revised Primary SDS
Change to Product Name
Change in Formulation**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 sheetLegend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	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