SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**Nitric Acid 68% Liquid**
Synonyms:	nitric acid / nitric acid, other than red fuming, with at least 65%, but not more than 70% nitric acid / Nitric acid, other than red fuming, with at least 65%, but not more than 70% nitric acid
Product Use:	Chemical raw material Metal surface treatment
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	Horticentre Ltd
Address:	10 Firth Street Drury, 2113
Telephone:	+64 9 294 8453
Fax Number:	+64 9 294 7272
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	19 February 2021

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval No: HSR100763

Pictograms

Oxidiser Toxic Chronic Corrosive

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
5.1.1C	H272	May intensify fire oxidiser.	Ox. Liq. 3
6.1D (inh)	H332	Harmful if inhaled.	Acute Tox. 4
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
8.1A	H290	May be corrosive to metals.	Met. Corr. 1
8.2B	H314	Causes severe skin burns and eye damage.	Skin Corr. 1B
8.3A	H318	Causes serious eye damage.	Eye Corr. 1

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P220	Keep/Store away from clothing /combustible materials.
P221	Take any precaution to avoid mixing with combustibles/incompatible materials.
P234	Keep only in original container.
P260	Do not breathe fumes, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
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.
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.
P370 + P378	In case of fire: Adapt extinguishing media to the environment for extinction.

Storage Code	Storage Statement
P405	Store locked up.
P406	Store in corrosive resistant/... container with a resistant inner liner.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Nitric acid 68%	100	7697-37-2

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: call doctor/physician.

If on Skin Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: get medical advice/attention.

If Swallowed Rinse mouth with water. Give lots of water to drink. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Call a POISON CENTER or doctor/physician if you feel unwell.

If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:	Refer to Section 11
Ingestion:	Nausea. Vomiting. Abdominal pain. Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Shock.
Inhalation:	Harmful if inhaled. Irritation of the respiratory tract. Dry/sore throat. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Respiratory difficulties. Possible inflammation of the respiratory tract. Risk of lung oedema. Blue/grey discolouration of the skin.
Skin:	Yellow skin. May stain the skin. Caustic burns/corrosion of the skin. Slow-healing wounds.
Eyes:	Corrosion of the eye tissue. Permanent eye damage.
Chronic:	ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Affection/discolouration of the teeth. Risk of pneumonia.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable, Non-combustible material. INDIRECT FIRE HAZARD. Promotes combustion.
Hazards from decomposition products	On heating/burning: release of toxic and corrosive gases/vapours nitrous vapours.
Suitable Extinguishing media	Adapt extinguishing media to the environment.
Precautions for firefighters and special protective clothing	Firefighting instructions: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
HAZCHEM CODE	**2R**

Section 6. Accidental Release Measures

Wear appropriate protective clothing as detailed in Section 8. Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames. Corrosion-proof appliances. Keep containers closed. Wash contaminated clothes.

Prevent soil and water pollution. Prevent spreading in sewers.

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Dilute toxic gases/vapours with water spray. Take account of toxic/corrosive precipitation water. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Do not take up in combustible material such as: saw dust. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

Dispose of according to Local Regulations detailed in Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Keep/Store away from clothing /combustible materials.
- Take any precaution to avoid mixing with combustibles/incompatible materials.
- Keep only in original container, tightly closed.
- Keep the substance free from contamination. Use corrosion proof equipment.
- Thoroughly clean/dry the installation before use.
- Do not discharge the waste into the drain.
- Never dilute by pouring water to the acid. Always add the acid to the water.
- Observe very strict hygiene - avoid contact.
- Measure the concentration in the air regularly.
- Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
- Do not breathe fumes, mist, vapours or spray.
- Wash hands thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:

- Store locked up.
- Store in corrosive resistant container with a resistant inner liner.
- Keep out of reach of children.
- KEEP SUBSTANCE AWAY FROM: combustible materials. reducing agents. (strong) bases. cellulosic materials. organic materials. metal powders. water/moisture.
- Store in a cool, dry, dark area.
- Keep out of direct sunlight.
- Ventilation at floor level.
- Fireproof storeroom.
- Provide for a tub to collect spills.
- Keep only in the original container.
- Store only in a limited quantity.
- Special rules on packaging: SPECIAL REQUIREMENTS: hermetical. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials: SUITABLE MATERIAL: stainless steel. aluminium. glass. MATERIAL TO AVOID: synthetic material.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³
Nitric acid [7697-37-2]	2	5.2	4	10

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). 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 the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls

Provide sufficient air exchange and/or exhaust.

Personal Protection Equipment

Eyes	Tightly fitting safety goggles.
Skin	Wear protective gloves and corrosion-proof clothing.
Respiratory	Gas mask with filter type B. Gas mask with filter type E. Gas mask with filter type NO. High vapour/gas concentration: self-contained respirator.
General	Do not eat, drink or smoke while using this product. Remove protective clothing and wash hands and face before meals and after work. Wash protective clothing daily after work.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Colourless-yellow. On exposure to light: red-brown.
Odour	Irritating/pungent odour. Asphyxiating odour.
Odour Threshold	0.29 - 0.98 ppm 0.75 - 2.5 mg/m³
pH **pH Solution**	1 (6 %) 6%
Boiling Point	83 - 122 °C
Melting Point	-42 - -38 °C
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	7.3 - 58.5 hPa (20 °C)
Vapour Density	Not available
Relative Density	2.2
Relative density of saturated gas/air mixture	1.01
Density	1413 - 1513 kg/m³
Solubilities	Exothermically soluble in water. Soluble in ether.
Water	Complete
LogPow	-2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic dynamic	0.0009 - 0.002 Pa.s (20 °C)
Oxidising properties	May intensify fire; oxidiser.
Saturation concentration	10 g/m^3
VOC content	0%
Other Properties	Gas/vapour heavier than air at 20°C. Hygroscopic. Producing fumes/mist. Physical properties depending on the concentration. Substance has acid reaction.

Section 10. Stability and Reactivity

Stability of Substance	Unstable on exposure to light. Hygroscopic.
Hazardous Reactions	Concentrated solution reacts exothermically with water (moisture). Decomposes on exposure to temperature rise:

	release of toxic and corrosive gases/vapours (nitrous vapours). Violent to explosive reaction with many compounds e.g.: with (strong) reducers, with (some) bases, with organic material and with combustible materials with risk of spontaneous ignition. Reacts violently with (some) metals. Decomposes slowly on exposure to light: release of toxic and corrosive gases/vapours (nitrous vapours). Violent to explosive reaction with (some) metal powders: release of highly flammable gases/vapours (hydrogen).
Conditions to Avoid	No additional information available.
Incompatible Materials	No additional information available.
Hazardous Decomposition Products	No additional information available.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Harmful if inhaled.
Eye	Causes severe eye damage.
Skin	Causes skin burns.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs (inhalation) through prolonged or repeated exposure.

Section 12. Ecotoxicological Information

Not an environment hazard.

nitric acid 68% (7697-37-2)
LC50 fish 2 72 ppm (LC50; 96 h)
EC50 Daphnia 1 180 mg/l (EC50; 48 h)
Threshold limit algae 1 > 19 mg/l (EC0)

Persistence and degradability	No data available.
Bioaccumulation	BCF fish 1 <= 1 (BCF) Log Pow -2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Mobility in Soil	No data available.
Other adverse effects	No data available.

Section 13. Disposal Considerations

Disposal Method:
Spent media that has removed toxic chemicals should be examined for specific hazards. Spilled product may be recovered for use if it has not come in contact with liquids or been exposed to significant amounts of gaseous contaminants. Dispose of according to Local Regulations.

Ensure any container holding waste product or contaminated spill media is labelled "Hazardous Waste – Oxidiser, Corrosive" and that the label also has the appropriate pictograms from section 2, waste type identifier, and the business name, address, and phone number.

Precautions or methods to avoid: None known.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Road, Rail, Sea and Air Transport

UN No	2031
Class - Primary	8
Subsidiary Risk	5.1
Packing Group	II
Proper Shipping Name	Nitric Acid 68%
Marine Pollutant	No
Special Provisions	If the product's individual container is below 1L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

EPA Approval Code: HSR100763

HSNO Classification: 5.1.1C, 6.1D(inh), 6.9B(inh), 8.1A, 8.2B, 8.3A

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	Open Container: >100L (5.1.1C) Closed Container: >1000L (5.1.1C)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	250L (8.2B)
Emergency Response Plan	1000L (8.2B)
Secondary Containment	1000L (8.2B)
Restriction of Use	None

Section 16 Other Information

Glossary

EC_{50}	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC_{50}	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD_{50}	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

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