Safety Data Sheet

Product Name: **Nitrigel**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	Hygiene Technologies Ltd
Address	28 Rangitane RoadHastings New Zealand
Freephone Number	0800 732 525
Telephone Number	(06) 876 4111
Facsimile	(06) 878 3802
E-Mail	info@hygienetech.co.nz
Emergency Telephone	NZ Fire Service - 111
	National Poisons Centre – 0800 764 766 (0800 POISON)
Recommended Uses	Acid cleaner

2. HAZARDS IDENTIFICATION

Dangerous Goods	Classified as a Dangerous Good according to NZS5433:2020 "Transport of Dangerous Goods on Land".
Hazardous Substances	Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.
Signal Word	**DANGER**
Pictograms	Corrosion
HSNO Classifications	Skin Corrosion – Category 1B Eye Damage – Category 1
Hazard Statements	May be corrosive to metals. Causes severe skin burns and eye damage.
Precautionary Statements	Keep out of reach of children. Read label before use. Keep in original container. Do not breathe spray. Wear protective gloves, eye protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Collect spillage.
Response Statements	If medical advice is needed, have product container or label at hand. IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Rinse skin with water. Remove immediately all contaminated clothing. Wash contaminated clothing before reuse. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. 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. Absorb spillage to prevent material damage.
Storage Statements	Store locked up. Store in corrosive resistant container.
Disposal Statements	Dispose of contents and container in accordance with NZ Hazardous Substances Disposal Notice 2017, Section 9.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Proportion
Nitric acid	7697-37-2	10-30%
Dobanic acid	27176-87-0	10-30%
Non-hazardous ingredients at the concentrations used	-	To 100%

4. FIRST AID MEASURES

For advice, contact National Poisons Information Centre (Phone 0800 764 766) or a doctor.

Eye Contact Hold eyelids apart and rinse the eye with water for several minutes. Immediately call the National Poisons Information Centre or a doctor. Continue flushing for at least 15 minutes oruntil advised to stop.

Skin Contact If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Immediately obtainmedical attention if skin irritation or rash develops. Washcontaminated clothing before reuse.

Swallowed Do NOT induce vomiting. Rinse mouth with water. Give waterto drink to achieve dilution. Immediately call the National Poisons Information Centre or a doctor.

Inhaled Remove to fresh air and keep at rest in a position comfortablefor breathing. Apply artificial respiration if not breathing. If experiencing respiratory symptoms, immediately call the National Poisons Information Centre or a doctor.

Advice to Doctor Treat symptomatically and as for exposure to corrosive acid. Refer to National Poisons and Hazardous ChemicalsInformation Centre 0800 764 766

5. FIRE FIGHTING MEASURES

Flammability Product is a non-flammable liquid.

Fire and Explosion Flammable hydrogen gas may be formed in contact with metals.

Suitable Extinguishing Media This product is non-combustible and non-flammable. If material is involved in fire use media appropriate for surrounding fireconditions. Safe to use water fog or water spray, foam, dry agent (carbon dioxide, dry chemical powder).

Fire-fighting advice Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Use water-fog to cool intact containers andnearby storage areas. Prevent contamination of drains or waterways; absorb runoff with sand or similar.

6. ACCIDENTAL RELEASE MEASURES

Small spills

For spills during personal use, rinse with plenty of water. Normal good housekeeping practices required.

Large spills

For major spills of bulk product, protective clothing consisting of overalls, safety glasses and gloves should be worn. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled container for recycling or disposal. Neutralise residues by dilution with water and then addition of lime or soda ash. **Caution – heat may be evolved on contact with water or weak alkaline solutions.** Dispose of neutralised liquid in accordance with local body regulations. Wash area down with excess water**.** Dispose of this resulting liquid in accordance with local body regulations. Do not wash concentrated material down the sewer. If contamination of sewers or waterways and/or surrounding environment has occurred notify Local Emergency Services, Local Authorities and the Regional Council. Recycle containers wherever possible. Wash damaged containers with water before disposal.

7. HANDLING AND STORAGE

Precautions for Handling

Before use carefully read the product label. Observe good personal hygiene practices and recommended procedures. Avoid skin and eye contact. Avoid generating and breathing mist or vapour. Avoid heat, naked flames and ignition sources. Wear protective gloves, protective clothing and eye protection. Do not eat, drink or smoke when using this product. Wash hands and exposed skin thoroughly after handling. Avoid release to the environment.
May corrode metallic surfaces. Use corrosion-resistant tools. Keep only in original container. Keep container tightly closed.

Precautions for Storage

An eyewash station should be installed next to where bulk product is made or stored.
Store in a cool, dry, well-ventilated area. Store locked up. Keep containers tightly closed when not in use. Ensure containers are air-tight. Protect against physical damage. Do not store or transport with foodstuffs. Store away from incompatible materials including alkalis, oxidising agents and most common metals. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace Exposure Guidelines
No value assigned for this specific material by the NZ Occupational Safety and Health Services (OSH).
However, Workplace Exposure Standards for components are:
Dobanic acid : WES - TWA: 1mg/m^3
Nitric acid: WES -TWA: 5.2mg/m^3 (2ppm)
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.
These 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 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.

Engineering Controls
Natural ventilation should be adequate under normal use conditions. When handling bulk product, ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Avoid breathing vapour. If necessary use with local exhaust ventilation or wear a respirator. Keep containers closed when not in use.

Personal Protective Equipment
Wear overalls, chemical goggles and PVC or rubber gloves. Ensure ventilation is adequate. Avoid inhaling vapours. If inhalation risk exists, use with local exhaust ventilation or while wearing respirator meeting the requirements of AS/ NZS 1715 and AS/ NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Opaque light yellow viscous liquid
Odour	Faint acidic
Solubility	Completely soluble in water
Specific Gravity	1.17
Flammability	Non flammable
Flash Point (°C)	Not applicable
Upper Explosion Limit	Not applicable
Lower Explosion Limit	Not applicable
pH	<1
Freezing Point	Not available
Boiling Point	Not available
Vapour Pressure	Not available

10. STABILITY AND REACTIVITY

Chemical Stability	Product is stable under directed conditions of use, storage and temperature. Hazardous polymerization will not occur. Slow decomposition of the Nitric acid component occurs at room temperature (accelerated by exposure to light, air, organic matter and increases in temperature) with the formation of nitrogen oxides, which may colour the product yellow or red.
Conditions to Avoid	Avoid contact with incompatible substances.
Materials to Avoid	A strong acid, it is corrosive and reacts violently with alkalis. Reacts violently with sodium hypochlorite and chlorine based oxidizing agents liberating toxic chlorine gas. Attacks many metals forming flammable hydrogen gas.
Preparation and Use of Product	Do not mix with other chemicals as the activity of the product may be removed.
Decomposition	May evolve toxic gases (nitrogen and sulphur oxides) if heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Corrosive. This product has the potential to cause acute and chronic health effects following exposure. Avoid eye or skin contact and vapour generation - inhalation.

Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Eye Contact	Corrosive to eyes, contact can cause corneal burns. Contamination of the eyes can result in permanent injury.
Skin Contact	Corrosive to skin – may cause skin burns.
Swallowed	Swallowing can result in nausea, vomiting,diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Inhaled	Mists may be irritating to mucous membranes and respiratorytract. May cause coughing, choking and inflammation and ulceration of the respiratory tract.
Long Term Effects	Repeated or long term exposure to acid vapours may have effects on the lungs, resulting in chronic bronchitis.
Toxicological Data	No LD_{50} data available for the product. For component Nitric acid: Oral LD50 (human): 430mg/kg body weight Inhalation LC50 (rat): 130mg/m^3 per 4 hour For component Dobanic acid: Oral LD50 (rat): 1470mg/kg body weight Dermal LD50 (rabbit): 3124mg/kg body weight

12. ECOLOGICAL INFORMATION

Environment	Avoid contaminating waterways. Harmful in the aquatic environment. Toxic effects on fish and plankton primarily due to pH shift. Does not cause biological oxygen deficit. Bioaccumulative: No Rapidly degradable: Yes
Persistence & degradability:	Product is a mobile liquid with low volatility and it is biodegradable in water. Not expected to bioaccumulate.
Aquatic toxicity	No LC_{50} data available for the product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal	Recycle wherever possible. Whatever cannot be saved for recovery or recycling should be sent to an approved waste disposal contractor for disposal in an approved waste facility. Processing, use or contamination of this product may change the waste management options. Dispose of container and unused contents using an approved waste disposal contractor. Care should be taken to ensure compliance with national and local regulations. This product is NOT for disposal by either landfill or via municipal sewers, drains, natural streams or rivers.
Legislation	Dispose of in accordance with relevant national and local regulations.
Special Precautions:	Emptied containers retain product residue and may therefore present hazards. The product is considered to be a hazardous waste because of its corrosivity. Observe all safeguards on label and in this SDS until container is cleaned or destroyed. Decontaminate small, empty containers with plenty of water. Empty large containers, such as drums, should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Dispose of washed containers in accordance with local authority requirements.

14. TRANSPORT INFORMATION

Transport of Dangerous Goods Pictogram



Road and Rail Transport:	Classified as a Dangerous Good according to NZS 5433:2020 Transport of Dangerous Goods on Land.
UN No	3264
Class-primary	8 (Corrosive)
Packing Group	II
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS NITRIC ACID)
Hazchem Code	2X

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

UN No	3264
Class-primary	8 (Corrosive)
Packing Group	II
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS NITRIC ACID)

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

UN No	3264
Class-primary	8 (Corrosive)
Packing Group	II
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS NITRIC ACID)

15. REGULATORY INFORMATION

ERMA (NZ) Approval Code	HSR002526
Group Standard	Cleaning Products (Corrosive) Group Standard 2020
Classifications	Skin Corrosion – Category 1B Eye Damage – Category 1

16. OTHER INFORMATION

Common Acronyms Used

CAS No.	Chemical Abstracts Service Registry Number
UN No.	United Nations Dangerous Goods Number

This SDS is a Hazard Communication tool and should be used to assist in Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.
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