Safety Data Sheet
FIL QUANTUM FORCE

Classified as: Hazardous according to the EPA Hazardous Substances (Hazard Classifications) Notice 2020.

Section 1: SUBSTANCE AND SUPPLIER DETAILS

Product Name:	FIL Quantum Force
Supplier:	FIL is a wholly owned subsidiary of GEA Farm Technologies New Zealand Ltd
Address:	72 Portside Drive Mt Maunganui 3116 New Zealand
Phone:	+64 7 575 2162
Website:	www.fil.co.nz
Recommended Use:	Acid detergent, sanitiser, restricted to workplace only.
In Case of Emergency Contact:	
CHEMCALL:	0800 CHEMCALL (243 622)

Section 2: HAZARDS IDENTIFICATION

Classified as a Dangerous Good for Transport.

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

HSNO APPROVAL NUMBER: **HSR002526**

HSNO CLASSIFICATIONS: 6.1D – Acutely toxic, oral
6.1D – Acutely toxic, inhalation
6.1E – Respiratory tract irritant
6.7A – Known carcinogen
6.9A – Toxic to human target organs or systems
8.1A – Corrosive to metals
8.2B – Skin corrosive
8.3A – Eye corrosive

GHS Classification: Acute toxicity, oral – Category 4
Acute toxicity, inhalation – Category 4
Corrosive to metals – Category 1
Skin corrosion – Category 1B
Serious eye damage – Category 1
Carcinogenicity – Category 1
Specific target organ toxicity, single exposure – Category 3, respiratory tract irritant
Specific target organ toxicity, repeated exposure – Category 1

Hazard Statements:

H302 Harmful if swallowed
H332 Harmful if inhaled
H335 May cause respiratory irritation
H290 May be corrosive to metals
H314 Causes severe skin burns and eye damage
H350 May cause cancer
H372 Causes damage to organs (liver, lungs) through prolonged or repeated exposure via ingestion and inhalation.

GHS Pictograms:

DANGER

PREVENTION STATEMENTS:

P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P234 Keep only in original container.
P260 Do not breathe mist/spray.
P264 Wash hands, exposed skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, protective clothing, and eye/face protection.

RESPONSE STATEMENTS:

P101 If medical advice is needed, have product container or label at hand.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P321 Specific treatment (see first aid instructions on this label).
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 CENTRE or doctor/physician.
P390 Absorb spillage to prevent material damage.
P308 + P313 If exposed or concerned: Get medical advice/attention.

STORAGE:

P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.

DISPOSAL:

P501 - In accordance with the EPA Hazardous Substances (Disposal) Notice 2017. Dispose of via an approved waste disposal contractor. Refer to Section 13 of the SDS.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixture: Acid cleaner

Main Component	CAS Number	Concentration (%wt)
Phosphoric acid	7664-38-2	10 - 25%
Sulphuric acid	7664-93-9	10 – 25%
Citric acid, monohydrate	5949-29-1	< 10%

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4: FIRST AID MEASURES

Workplace Facilities Required: Eye wash and safety shower facilities should be provided.

If Inhaled: Remove to fresh air. Seek medical attention if symptoms persist.

In Contact with Eye: Hold eyes open, flush continuously with water for at least 20 minutes. Seek immediate medical attention. Continue flushing until told to stop by a medical professional.

In Contact with Skin: Remove contaminated clothing. Wash skin with plenty of water. Seek immediate medical attention. Wash contaminated clothing before reuse.

If Swallowed: DO NOT INDUCE VOMITING. Rinse mouth. Give small quantities of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention. If vomiting occurs, keep head below hips to prevent aspiration to lungs.

Advice to Doctor: Treat symptomatically. Product is corrosive to skin and eyes. Ophthalmological opinion should be sought for burns to eyes.

Section 5: FIRE FIGHTING MEASURES

Fire/Explosion Hazard: Product is not flammable or combustible. Containers may pressurise and burst if heated. Move containers from path of fire if safe to do so. Cool fire exposed containers with water spray or fog.

Suitable Extinguishing Media: Use water spray or fog, foam, dry chemical powder, or carbon dioxide.

Precautions in Connection with Fire: May give off toxic and corrosive fumes in a fire. Electrical conductor – isolate power in case of spills

Advice for firefighters: Wear full firefighting gear and self-contained breathing apparatus.

Section 6: ACCIDENTAL RELEASE MEASURES

An emergency response plan meeting the requirements of Part 5 of the Health and Safety at Work (Hazardous Substances) Regulations 2017 is required when held in quantities greater than 1,000L.

Precautions:	Clear area of all unprotected personnel. Keep unnecessary and unprotected personnel from entering area. Substance may conduct electricity, ensure power supply is isolated. Avoid generating mist/spray. Avoid release to the environment.
Suitable Protective Equipment:	Emergency responders must use personal protective equipment, including gloves, protective overalls and footwear, safety goggles or face shield and respiratory protection if there is a risk of inhaling mist/spray.
Spill or Leak Procedures.	Contain the spill. Small quantities may be neutralised with soda ash by making a slurry of soda ash in water and carefully working it into the spill from the outer edges to the centre, using a plastic broom. Absorb with suitable inert material such as sand, earth. Collect spilled material and place in a suitable, clean, chemical waste container. Ensure waste container is properly labelled.
Waste Disposal Methods:	Dispose of as per Section 13.
Emergency preparation:	Ensure there is appropriate and adequate personal protective equipment, trained personnel and clean up materials for management of accidental release.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:	Avoid contact with skin and eyes. Avoid generating mists/spray. Do not eat, drink, or smoke when using this product. Remove contaminated clothing and wash hands and face before entering eating areas.
Storage:	Keep out of reach of children. Store locked up. Store in original container. Keep away from heat and direct sunlight. Store away from food and animal feed.
Site Storage Requirements:	Site Signage will be required when quantities exceed 250L.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace Exposure Standards NZ:	No Workplace Exposure Standards have been established for this product. Workplace Exposure Standards have been set for the following ingredient: Phosphoric acid: TWA 1 mg/m^3 Sulphuric acid: TWA 0.1 mg/m^3, carcinogenic.
Engineering Controls:	Eyewash facilities and safety showers should be provided in the work area where there is a risk of exposure to eyes and skin. Use in a well-ventilated area. If natural ventilation is insufficient consider engineering controls such as local exhaust ventilation to ensure workers are not exposed to levels exceeding the exposure standards.
Personal Protective Equipment:	Observe good chemical hygiene practice.
Hand protection:	Wear protective gloves that are resistant to the product, e.g. PVC. Gloves should be elbow length. Refer to Australian and New Zealand Standard AS/NZS 2161 for protective gloves.

Skin and body protection: Use protective overalls and PVC apron. Remove any contaminated clothing to avoid prolonged contact with the skin. Wash work clothes regularly. Refer to Australian and New Zealand Standard AS/NZS 4501 for occupational protective clothing.

Eye protection: Use chemical safety goggles to protect eyes. Use face shield to protect face. Refer to AS/NZS 1336 and 1337 for suitable eye and face protection.

Respiratory protection: Where there is inadequate ventilation and use results in the formation of mists/spray, use a respirator. Refer to AS/NZS 1715 and AS/NZS 1716 for suitable respiratory protection.

Other information: PPE selected must be impervious to the substance. Do not eat, smoke, or drink where material is handled, processed, or stored. Wash hands carefully before eating, drinking, or smoking. Handle in accordance with safe industrial hygiene practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	**Colour:**	Red
Odour:	Odourless	**Odour Threshold:**	Not applicable
pH:	1.5	**Solubility:**	Fully miscible
Melting/Freezing Point:	Approx. -15°C (FP)	**Boiling Point:**	Approx. 105°C
Flash Point:	Not applicable	**Flammability:**	Not flammable
Lower/Upper Flammability Limits:	Not applicable	**Vapour Pressure:**	Not applicable
Vapour Density:	Not applicable	**Relative Density:**	1.26
Partition Coefficient:	Not available	**Auto-ignition Temperature;**	Not applicable
Decomposition Temperature:	Not available	**Kinematic Viscosity:**	Not available
Particle Characteristics:	Not applicable		

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.

Reactivity: Reacts exothermically with alkalis. Corrodes metal.

Conditions to Avoid: Avoid generating mists/spray. Avoid excessive heat. Avoid electrical sources of ignition.

Incompatibility: Incompatible with strong oxidisers, alkalis, powdered metals, and iron containing compounds. Do not mix with chlorinated products, e.g. bleach, pool chlorine, sodium hypochlorite.

Hazardous Decomposition: Decomposition on heating may result in formation of toxic and corrosive fumes.

Section 11: TOXICOLOGICAL INFORMATION

Acute Exposure

Acute Toxicity:

	LD50 oral > 300 - ≤ 2000 mg/kg. LD50 dermal > 2000 mg/kg LC_{50} inhalation (mist) > 1.0 - ≤ 5.0 mg/L
Inhalation:	Inhalation of large volumes of mists/spray may cause serious irritation to mucous membranes and breathing difficulties.
Ingestion:	Ingestion may cause chemical burns to mouth and gastrointestinal tract and may cause nausea, diarrhoea, and vomiting.
Skin Corrosion/Irritation:	Corrosive to skin. May cause severe skin burns.
Serious Eye Damage/Eye Irritation:	Corrosive to eyes. May cause serious eye damage and corneal burns.
Respiratory or Skin Sensitisation:	Not known to cause respiratory or contact sensitisation.

Chronic Exposure:

Mutagen/Carcinogen/Reproductive Toxicant	Product is a known carcinogen. Not expected to be mutagenic or a reproductive toxicant.
Specific Target Organ Toxicity Single Exposure:	Causes respiratory tract irritation.
Specific Target Organ Toxicity Repeated Exposure:	Causes damage to organs (liver, lungs) through prolonged or repeated exposure via inhalation or ingestion.
Aspiration Hazard:	No information available. Not expected to be an aspiration hazard.
	Toxicity data is based on hazardous ingredient information and information in the EPA Chemical Classification and Identification Database.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Not expected to be ecotoxic.
	LC/EC_{50} > 100 mg/L
Persistence/degradability:	Not expected to be persistent.
Bioaccumulation:	Not expected to bioaccumulate.
Mobility in soil:	No information available.
Other adverse effects:	None identified.
Ingredients with Ecotoxic classifications:	There are no ingredients that have ecotoxic classifications.
	Ecotoxicity data is based on information in the EPA Chemical Classification and Identification Database.

Section 13: DISPOSAL CONSIDERATIONS

Disposal:	Recycle and reuse wherever possible. Waste product may be treated with soda ash prior to disposal so it is no longer hazardous. Dispose of waste product via an approved waste disposal contractor.

Disposal of Packaging: Dispose of packaging via an approved waste disposal contractor. Triple rinse containers when empty. Add rinse solution to use solutions.

Avoid contamination of natural water supplies with the product or empty container. After cleaning, all existing labels should be removed.

Section 14: TRANSPORT INFORMATION

Classified as a Dangerous Good for transport in accordance with NZS5433:2020, IMDG or IATA.

NZS5433:2020
UN No: 3264
Proper Shipping Name: Corrosive liquid, acid, inorganic, n.o.s. (phosphoric acid, sulphuric acid)
Class: 8
Packing Group: II
Environmental hazard: No
Limited Quantity: 1L
Hazchem Code: 2X

IMDG:
UN No: 3264
Proper Shipping Name: Corrosive liquid, acid, inorganic, n.o.s. (phosphoric acid, sulphuric acid)
Class: 8
Packing Group: II
Marine Pollutant: No
EmS: F-A, S-B
Limited Quantity: 1L

IATA:
UN No: 3264
Proper Shipping Name: Corrosive liquid, acid, inorganic, n.o.s. (phosphoric acid, sulphuric acid)
Class: 8
Packing Group: II
Environmental hazard: No

Ensure transportation methods prevent leakage from packages and collapsing loads.

Section 15: REGULATORY INFORMATION

Group Standard Allocation: Cleaning Products (Corrosive) Group Standard 2020

HSNO Approval Code: HSR002526

Classifications:	Acute toxicity, oral – Category 4 Acute toxicity, inhalation – Category 4 Corrosive to metals – Category 1 Skin corrosion – Category 1B Serious eye damage – Category 1 Carcinogenicity – Category 1 Specific target organ toxicity, single exposure – Category 3, respiratory tract irritant Specific target organ toxicity, repeated exposure – Category 1
NZ Inventory of Chemicals:	All ingredients are listed in the NZ Inventory of Chemicals.

This substance triggers:

Compliance Certificate	250L
Certified Handler	N/A
Emergency Response Plan	1,000 L
Secondary Containment	1,000 L
Signage	250 L

This substance is not required to be Tracked. This substance is restricted to workplaces only. Suppliers need to comply with the requirements of Clause 13 of the EPA Hazardous Substances (Hazardous Property Controls) Notice.

All workplace personnel handling this substance are required to be trained on the safe handling and PPE requirements for the hazards associated with this substance.

Section 16: OTHER INFORMATION

The information provided in this Safety Data Sheet relates only to the specific material designated herein. This Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products.

This substance is approved under HSNO for use as a cleaning product. All reasonable care has been taken to ensure that the information and advice contained herein are from sources believed to be reliable and to represent the most up-to-date knowledge available at the date given in Section 16. No liability is assumed for any damages related to the use or misuse of this substance.

All chemical materials may present unknown hazards as people have varying degrees of sensitivity to chemicals. Therefore, this product should be used with caution. The information herein is given in good faith, but no warranty, express or implied is made.

SDS Issued: 13/05/2024

Supersedes: 28/03/2024

Reason for Revision: Review and update.

References:

EPA NZ Chemical Classification and Information Database
EPA Guide: Guide to Classifying Hazardous Substances in New Zealand, Version 1

Summary of Abbreviations: EPA – Environmental Protection Authority
GHS – Global Harmonisation System
CAS – Chemical Abstracts Service

TWA – Time Weighted Average

END OF SAFETY DATA SHEET