Waitaki District Council | TE KAUNIHERA Ā ROHE O WAITAKI

+64 3 433 0300
0800 108 081
service@waitaki.govt.nz
20 Thames Street
Ōamaru, 9400
Private Bag 50058
Ōamaru 9444, NZ

Date released:

Subject: Fluoride Supply Chain Details

LGOIMA: OIA- 1638

Original LGOIMA Request:

Full details of the request can be found in the supporting document linked to this request.

Ministry of Health have indicated that the below information is to be supplied by Waitaki District Council:

" 3. Provide the full chemical composition, including chemical names, chemical formulae, and concentrations of all fluoride compounds added to the public water supply.

4. Provide all Safety Data Sheets (SDS), production records, and toxicology studies related to the fluoride chemicals supplied.

8. List all companies involved in transporting fluoride chemicals from production sites to distributors, councils, and water treatment facilities. Include freight, shipping, and air transport entities.

11. Identify all contractors, consultants, and water treatment personnel who handle, dose, or monitor fluoride chemicals.

17. Provide documentation of regulatory compliance, inspections, or audits by government or third-party authorities."

Official LGOIMA Response:

" 3. Provide the full chemical composition, including chemical names, chemical formulae, and concentrations of all fluoride compounds added to the public water supply. Chemical

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compound information is included on the attached HFA Safety Data Sheet (Located in supporting docs). HFA dose rate is 0.8ppm.

4. Provide all Safety Data Sheets (SDS), production records, and toxicology studies related to the fluoride chemicals supplied. See attached HFA Safety Data Sheet.

8. List all companies involved in transporting fluoride chemicals from production sites to distributors, councils, and water treatment facilities. Include freight, shipping, and air transport entities. Transport company for deliveries is Mainfreight.

11. Identify all contractors, consultants, and water treatment personnel who handle, dose, or monitor fluoride chemicals. Maintenance contractor is South Roads. Service contractor is Filtec. Fluent Consultants peer review treatment plant performance on a cyclic basis. Waitaki District Council Engineers monitor Supervisory Control and Data Acquisition (SCADA), the computer system used for monitoring and control purposes in Waitaki District water and wastewater treatment plants, which includes various fluoride parameters.

17. Provide documentation of regulatory compliance, inspections, or audits by government or third-party authorities." Attached Location Compliance Certificate includes the fluoride facilities and installation.

133 Molesworth Street
PO Box 5013
Wellington 6140
New Zealand
T+64 4 496 2000

05 December 2025

Sovereign Sharna

By email: fyi-request-32674-006205a3@requests.fyi.org.nz
Ref: H2025074650

Tēnā koe Sharna

Response to your request for official information

Thank you for your request under the Official Information Act 1982 (the Act) to the Ministry of Health – Manatū Hauora (the Ministry) on 26 October 2025 for information regarding community water fluoridation.

As noted in the Ministry's email on Monday 24 November 2025, your request seeks information which is held by several other agencies and local authorities. The Ministry extended the period of time available to respond to your request under section 15A of the Act, as the consultations necessary to make a decision on the request are such that a response to the request cannot reasonably be made within the original time limit. The Ministry would like to apologise for any delay and any inconvenience caused.

On the 26 November 2025, the Ministry transferred several parts of your request to several agencies under section 14(b)(i) of the Act. This included questions 3, 5, 15, 16, 17, 18 and 20 to the Water Services Authority - Taumata Arowai, question 10 to NZ Transport Agency - Waka Kotahi and question 18 to WorkSafe.

The Ministry also notes your request seeks information which is both held by, and more closely connected to the functions of, several local authorities. The Ministry has consulted 32 local authorities to assess what information they hold in relation to your request. This has been in order to transfer the relevant parts of your request to these local authorities under section 12 of the Local Government Official Information and Meetings Act 1987 (LGOIMA) and section 14 of the Official Information Act (OIA).

Please refer to the transfer letter, dated 5 December 2025, which outlines the transfers the Ministry has issued to the relevant local authorities for information they hold.

Please find a response to each part of your request below.

> *A. Supply & Production*
> *1. Identify the factory/facility where the fluoride chemicals supplied to New Zealand water systems are produced, including location, operator, and production process. Include all applicable laws, regulations, licenses, and international standards governing manufacture.*
> *2. Identify all upstream raw material suppliers, including chemical sources such as phosphate rock suppliers, and any subcontracted labs or blending facilities.*

3. Provide the full chemical composition, including chemical names, chemical formulae, and concentrations of all fluoride compounds added to the public water supply.
4. Provide all Safety Data Sheets (SDS), production records, and toxicology studies related to the fluoride chemicals supplied.
5. Provide details of any chemical by-products, waste, or residues generated during production, storage, transport, or dosing, including their environmental and human health impacts.
6. Disclose all corporate entities, owners, and shareholders that profit from the manufacture or sale of fluoride chemicals in New Zealand.
7. Clarify whether New Zealand currently manufactures fluoride chemicals domestically, imports ready-made fluoride chemicals, or both, including details of manufacturers and import sources.
B. Transport & Logistics
8. List all companies involved in transporting fluoride chemicals from production sites to distributors, councils, and water treatment facilities. Include freight, shipping, and air transport entities.
9. Provide shipping manifests, including transport schedules, storage conditions, and handling protocols (personal driver details may be redacted).
10. Include all applicable laws, licenses, and regulatory frameworks under which these transporters operate, particularly regarding hazardous substances.
C. Contractors & Distribution
11. Identify all contractors, consultants, and water treatment personnel who handle, dose, or monitor fluoride chemicals.
12. Provide full contract details, including terms of service, duration, performance bonds, insurance coverage, and any professional certifications required.
13. Disclose all corporate structures, shareholders, and profit arrangements related to these contractors.

The Ministry does not hold any information within scope of parts 1-13 of your request. As noted in our correspondence dated 24 November, 26 November and 5 December 2025 respectively, some of the information you seek is held by other agencies subject to the OIA, as well as relevant local authorities subject to the LGOIMA.

Please refer to the two transfer letters the Ministry has issued for further details on which parts of this request will be addressed by the relevant bodies who hold parts of this information. Please note that some of this information will be held by private companies. These companies are not subject to the Act and are therefore not obligated to share information they hold.

The Ministry queried a transfer to the Environmental Protection Agency. They noted that any information they held in relation to your request is already in the public domain. They provided the following information which may be of interest to you:

Hazardous substances imported to or manufactured in New Zealand require an approval. In some cases, this approval can take the form of a Group Standard, where whole groups of substances with defined classifications and uses are approved. In the cases of substances used in the treatment of water, these could be covered by one of the Water Treatment Chemicals Group Standards 2020 – there are 8 depending on the hazard classification of the substance in question. The Group Standards identify any specific controls on using the substances and refer to the EPA Notices which put in place further requirements. The importers and manufacturers are responsible for self-assigning to the correct group standard and maintaining records of this, and the EPA does not hold these records.

The Group Standards can be found here: www.epa.govt.nz/hazardous-substances/substance-approvals-and-group-standards/group-standard-approvals/find-group-standard-approvals/.

Please note the Ministry is funding the capital costs of setting up community water fluoridation for the 14 local authorities that have been directed to fluoridate by the Director-General of Health. Ongoing costs in relation to the operation and implementation of fluoridation will be met by the local authorities.

Over 60 years of international and New Zealand research shows community water fluoridation is a safe, effective and affordable way to improve oral health.

Last year, the Ministry published a new evidence review about the safety and effectiveness of community water fluoridation, taking into account the latest international evidence. The review found community water fluoridation provides ongoing clear benefits even when alternative forms of fluoride (such as fluoride toothpaste) are available. You can find the evidence review here: www.health.govt.nz/publications/community-water-fluoridation-an-evidence-review.

The Ministry has published previous responses on similar topics which may be of interest to you below:

- www.health.govt.nz/system/files/2024-08/h2024043279_response.pdf
- www.health.govt.nz/system/files/2024-06/h2024042074.pdf

For other published responses on the subject of fluoridation that may be of interest to you, please refer to the following link: www.health.govt.nz/information-releases?keywords=Fluoride

D. Policy & Decision-Makers
14. List all individuals, boards, committees, and advisers who approve or recommend fluoride use in New Zealand, including councils, Ministry of Health, and public health associations.

In accordance with section 18(d) of the Act, a list of some of the organisations that endorse community water fluoridation can be found on the Ministry's website here: www.health.govt.nz/strategies-initiatives/programmes-and-initiatives/oral-health/community-water-fluoridation-policy#toc-1-4.

Please note this part of your request will be addressed by some of the local authorities. Please refer to the transfer letter(s) for further details.

15. Include all corporate affiliations, financial interests, and advisory bodies that influence decisions regarding fluoride.
E. Compliance, Oversight & Safety
16. Provide copies of all risk assessments, environmental impact statements, monitoring reports, and internal or external evaluations regarding fluoride safety, dosing, and public health.
17. Provide documentation of regulatory compliance, inspections, or audits by government or third-party authorities.
18. Disclose any incidents, complaints, or breaches relating to fluoride chemical safety, handling, or dosing.

The Ministry does not hold this information; however, it is held by the Water Services Authority - Taumata Arowai. Additionally, WorkSafe holds information related to question 18. Please refer to their responses in due course.

Please note some local authorities also hold some of this information. Please refer to the transfer letter and their respective responses for further details.

> *F. Global Precedents & Case Studies*
> *19. Provide documented information on countries that have ceased or restricted water fluoridation, including Germany, Sweden, Japan, Netherlands, Finland, Israel, Hungary, and the United States (Utah).*

This part of your request is refused under section 18(g)(i) of the Act as the information requested is not held by the Ministry and there are no grounds for believing it is held by another agency subject to the Act.

> *20. Include international case law, peer-reviewed studies, legal decisions, or environmental assessments showing health or environmental risks, chemical by-products, or public health outcomes linked to fluoride.*
> *21. Provide references to any policy or scientific evidence considered when approving or maintaining fluoridation in New Zealand*

The Ministry keeps a watching brief on the national and international evidence base. Information relating to the safety and effectiveness of community water fluoridation can be found on the Ministry of Health's website at: www.health.govt.nz/strategies-initiatives/programmes-and-initiatives/oral-health/community-water-fluoridation-policy

Information about the implementation of community water fluoridation in New Zealand can be found on the Ministry's website at: www.health.govt.nz/strategies-initiatives/programmes-and-initiatives/oral-health/implementation-of-community-water-fluoridation.

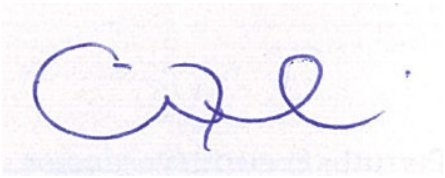
Additionally, the Water Services Authority - Taumata Arowai will address question 20 in its response.

If you wish to discuss any aspect of your request with us, including this decision, please feel free to contact the OIA Services Team on: oiagr@health.govt.nz.

Under section 28(3) of the Act, you have the right to ask the Ombudsman to review any decisions made under this request. The Ombudsman may be contacted by email at: info@ombudsman.parliament.nz or by calling 0800 802 602.

Please note that this response, with your personal details removed, may be published on the Ministry website at: www.health.govt.nz/about-ministry/information-releases/responses-official-information-act-requests

Nāku noa, nā



Clare Possenniskie
Acting Group Manager, Public Health Policy and Regulation
Public Health Agency | Te Pou Hauora Tūmatanui

SAFETY DATA SHEET

Revision date: 06-Jun-2023

Revision Number 7

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name HYDROFLUOROSILICIC ACID

Product Code(s) 000000015539

Other means of identification

UN number 1778

Synonyms Hydrofluorosilicic acid; Hydrofluosilicic acid; Hydrosilicofluoric acid; Silicate(2-), hexafluoro-, dihydrogen; Fluorosilicic acid; HFA.

Recommended use of the chemical and restrictions on use

Recommended use Fluoridation of water.

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
Facsimile: +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

Water Treatment Chemicals (Corrosive) Group Standard 2020
Approval Number: HSR002681

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 1

Label elements

Hazard statements
H290 - May be corrosive to metals
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H370 - Causes damage to organs

Precautionary Statements - Prevention
Keep out of reach of children.
Do not breathe dusts or mists
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Wear protective gloves / protective clothing / eye protection / face protection
Precautionary Statements - Response
IF exposed: Call a POISON CENTER or doctor/physician
Specific treatment (see First aid on this SDS)
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: Wash with plenty of soap and water
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
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Precautionary Statements - Storage
Store locked up
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-%
Fluorosilicic acid	16961-83-4	21.0-23.0%

Hydrofluoric acid	7664-39-3	0.1-<1.0%
Water	7732-18-5	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 and keep at rest in a position comfortable for breathing. If breathing is difficult, (trained personnel should) give oxygen. If breathing is irregular or stopped, administer artificial respiration. Seek immediate medical attention/advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Immediate medical attention is required.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Then apply calcium gluconate gel. Take off contaminated clothing and wash before reuse. Get immediate medical advice/attention.

Ingestion Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Can cause corneal burns. Delayed pulmonary edema may occur. Delayed health effects.

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. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Special protective actions for fire-fighters

Special protective equipment for Firefighters should wear self-contained breathing apparatus and full firefighting turnout

fire-fighters	gear. Use personal protection equipment.
Hazchem code	2X

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Attention! Corrosive material. Avoid contact with skin and eyes. Do not breathe vapor or mist. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.
For emergency responders	Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of spill to collect runoff water. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Keep out of drains, sewers, ditches and waterways.
Methods for cleaning up	Soak up with inert absorbent material. Use personal protective equipment as required. Pick up and transfer to properly labelled containers.

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	Do not breathe vapor or mist. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. Use personal protection equipment. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Always add the acid to water, never the reverse. Keep out of reach of children. Not to be available except to authorised or licensed persons.
General hygiene considerations	Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a cool, well-ventilated place. Store locked up. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep container closed when not in use.
Incompatible materials	Alkalis. Organic compounds. 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):

Chemical name	New Zealand	ACGIH
Hydrofluoric acid 7664-39-3	2 mg/L urine prior to shift Fluoride 3 mg/L urine end of shift Fluoride	

Fluorides, as F: WES-TWA 2.5 mg/m³, bio
Hydrogen fluoride, as F: Ceiling 3 ppm, 2.6 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.

The Biological Exposure Indices (bio) are not applicable to non-metal fluorides and organic fluoride-containing compounds.

WES - Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded during any part of the working day.

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

Hand protection Elbow-length impervious gloves.

Skin and body protection Overalls. Boots. Splash apron or equivalent chemical impervious outer garment.

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	No information available
Color	Pale Yellow
Odor	Characteristic , Pungent , Acidic
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No data available	None known
Melting point / freezing point	-15°C to -21°C	None known
Boiling point / boiling range	>100°C	None known
Flash point	Not applicable	None known
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	Not applicable	
Lower flammability or explosive limits	Not applicable	
Vapor pressure	18 mm Hg @20°C	None known
Vapor density	No data available	None known
Relative density	1.16-1.22 @20°C	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	Not applicable	None known
Decomposition temperature	105°C	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Corrosive to metals. Reacts with alkalis.

Chemical stability

Stability Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions Contact with metals may evolve flammable hydrogen gas. Hydrogen fluoride will react with all silicon containing materials such as glass, concrete, and chemical spill sorbents such as vermiculite. This reaction will cause the generation of the highly toxic gas, silicon tetrafluoride.

Conditions to avoid

Conditions to avoid Contact with foodstuffs.

Incompatible materials

Incompatible materials Alkalis. Organic compounds. Metals.

Hazardous decomposition products

Hazardous decomposition products Hydrogen fluoride. Oxides of silicon. Fluorides.

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. Delayed (up to 48hours) fluid build up in the lungs may occur.

Eye contact Corrosive to the eyes and may cause severe damage including blindness.

Skin contact Contact causes severe skin irritation and possible burns.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Can burn mouth, throat, and stomach.

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.

Acute toxicity

Numerical measures of toxicity
Refer to component information below.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Fluorosilicic acid	= 430 mg/kg (Rat)	-	= 1.11 mg/L (Rat) 1 h
Hydrofluoric acid	-	-	= 0.79 mg/L (Rat) 1 h

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 Fluoride ion has been classified by the International Agency for Research on Cancer (IARC) as a Group 3 agent. Group 3 - The agent is not classifiable as to its carcinogenicity to humans. Data available is insufficient for an assessment to be made.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs. Classification is based on mixture calculation methods based on component data.

Aspiration hazard No information available.

Chronic effects: Repeated or prolonged exposure may result in bone changes (fluorosis). Fluorosis in humans can result with the repeated ingestion of >6mg of fluorine per day. The fluoride accumulates in bone and can lead to the development of osteosclerosis and other bone changes. Teeth may also be affected.

Symptoms of fluorosis may include weight loss, brittle bones, anaemia, weakness and stiffness of joints.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways. Avoid contaminating waterways.

Terrestrial ecotoxicity There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Fluorosilicic acid	-	LC50: =65mg/L (96h, Poecilia reticulata) LC50: =28.7mg/L (96h, Pimephales promelas)	-
Hydrofluoric acid	-	LC50: =660mg/L (48h, Leuciscus idus)	EC50: =270mg/L (48h, Daphnia species)

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation No information available.

Mobility

Mobility in soil No information available.

Chemical name	Partition coefficient
Hydrofluoric acid	-1.4

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 1778
Proper shipping name FLUOROSILICIC ACID
Hazard class 8
Packing group II
Hazchem code 2X

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

UN number 1778
UN proper shipping name FLUOROSILICIC ACID
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 1778
UN proper shipping name FLUOROSILICIC ACID
Transport hazard class(es) 8
Packing group II
IMDG EMS Fire F-A
IMDG EMS Spill S-B
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

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	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: 06-Jun-2023

Reason(s) For Issue: Change in Physical Properties

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	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

KM COMPLIANCE LIMITED

PO Box 5235
Dunedin 9058
P: 03 477 5996
E: cert@kmcompliance.co.nz
W: www.kmcompliance.co.nz

COMPLIANCE CERTIFICATE

Location

Issued in accordance with regulations 6.23 and regulation 9.26, 10.34, 10.36, 12.17, 12.42 or 13.38 of the Health and Safety at Work (Hazardous Substances) Regulations 2017

Issued To:
Waitaki District Council
Private Bag 50058
Oamaru 9444
+64 3-433 0300

Certificate No: 100143-48979

Site Details/Description:
Oamaru Water Treatment Plant
180 Reservoir Road
Oamaru North
Oamaru 9492
-45.068361495155,170.9712194627
+64 27 264 0102

This certificate certifies that the requirements prescribed in regulation 9.26, 10.34, 10.36, 12.18, 12.19, 12.43, 12.44 or 13.39 for a location compliance certificate have been met.

Specific Regulation: Regulation 12.17 of the Health & Safety at Work (Hazardous Substances) Regulations 2017

Substance Name/Location:	Class(es):	Maximum Quantity:
Oxidising Gas - Chlorine	5.1.2A 2x70kg Cyls	140 Kg
Oxidising Gas - Chlorine	5.1.2A 2x920kg Drums	1,840 Kg

Details of Certification: This certificate becomes invalid when the substances onsite are moved or changed. Should this occur please contact your compliance certifier for a new inspection to maintain compliance.

KMcAnally

Kirstine (Kirsty) Adele McAnally
Compliance Certifier Registration No: 100143

Date Issued: Sep 30, 2025

Date comes into force: Sep 30, 2025

Expiry Date: Sep 30, 2026

This certificate is issued by Kirstine (Kirsty) Adele McAnally, being an individual compliance certifier authorised by WorkSafe New Zealand under regulation 6.8 of the Health and Safety at Work (Hazardous Substances) Regulations 2017, in accordance with regulation 6.8(2)(a) to (d) of those regulations.