

Reference Number: 2024/1120

29 July 2024

Tēnā koe

Thank you for email of 7 July 2024 requesting under the Local Government Official Information and Meetings Act 1987 (LGOIMA), information relating to fluoride products added to the water supply. Please see outlined below a response to each part of your request.

Is your council adding fluoride to the water supply?

No.

Horowhenua District Council (the Council) is not currently adding fluoride to the water supply. However, we are mandated by the Director General of Health to add fluoride to the Levin Water Supply by December 2024.

What is the LEGAL name of the company that makes it?

Ballance Agri-Nutrients Limited.

What is the specific CHEMICAL name of the product that is added?

HFA; Hydrofluorosilicic acid

Please provide an email copy of the MSDS of the product being used.

Please see attached

How many PPM are added to the water and how often are they added?

0.7 to 1.0ppm

What is the name of the person in charge of/who signs off the Water treatment in your area?

Taumata Arowai is the water services regulator for Aotearoa New Zealand. The Council is in charge of ensuring compliance with relevant legislation and meeting regulations under the Water Services Act 2021 and the Drinking Water Standards for New Zealand Regulations 2022.

A picture of the bag would be great too please if possible.

The Council cannot provide a picture of the bag as the chemical is delivered in a tanker.



You are entitled to seek an investigation and review by the Office of the Ombudsman. Information about how to make a complaint is available at <u>www.ombudsman.parliament.nz</u> or freephone 0800 802 602.

Horowhenua District Council publishes responses to Local Government Official Information and Meetings Act 1987 (LGOIMA) requests that we consider to be of wider public interest, or which relate to a subject that has been widely requested. To protect your privacy, we will not generally publish personal information about you, or information that identifies you. We will publish the LGOIMA response along with a summary of the request on our website. Requests and responses may be paraphrased.

If you would like to discuss this decision or any of the information provided as part of this request, please contact Daniel Haigh (Group Manager Community Infrastructure) on <u>danielh@horowhenua.govt.nz</u>, or <u>LGOIMAOfficer@horowhenua.govt.nz</u>.

Ngā mihi

HAmiz

Ashley Huria Executive Sponsor

SAFETY DATA SHEET





Revision Number 7

1. IDENTIFICATION OF TH	E MATERIAL AND SUPPLIER		
Product identifier			
Product Name	HYDROFLUOROSILICIC ACID		
Product Code(s)	00000015539		
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 cont	act		
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 IDENTIFICAT	ION		
Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.			
Classified as hazardous according to o	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

<u>Mixture</u>

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	n of first	aid measu	ires
Description	1 01 111 31	alu measu	163

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

2X

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 containm	ent 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	2 mg/L urine prior to shift Fluoride	
7664-39-3	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.



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 o	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	Not applicable	
limits		
Lower flammability or explosive	Not applicable	
limits		
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

EcotoxicityKeep out of waterways. Avoid contaminating waterways.Terrestrial ecotoxicityThere 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.

<u>Mobility</u>

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