

Classified as hazardous in accordance with the criteria of EPA New Zealand

## Section 1 - Identification

### Product Identifier

**Product Name** Orion fluoride standard with TISAB

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

<b>Product Code</b>	<b>ORI040906W, ORI040908W, ORI040907W</b>
<b>Address</b>	Thermo Fisher Scientific New Zealand Ltd 244 Bush Road, Albany, Auckland, New Zealand
<b>Emergency Tel.</b>	<b>CHEMTREC®</b> <b>09 980 6780 or +64 9 980 6780</b>
<b>Telephone / Fax Numbers</b>	Tel: 09 980 6700 Fax: 09 980 6788
<b>E-mail address</b>	<u>ANZinfo@thermofisher.com</u>

## Section 2 - Hazard(s) Identification

### Classification under Work Safe New Zealand

Classified as hazardous in accordance with the criteria of EPA New Zealand

**HSNO Approval Number** **HSR002596**

### GHS Classification

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Reproductive Toxicity	Category 2

#### Environmental hazards

Based on available data, the classification criteria are not met

### Label Elements

**Signal Word****Warning****Hazard Statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H361 - Suspected of damaging fertility or the unborn child

**Precautionary Statements****Prevention**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response**

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P337 + P313 - If eye irritation persists: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

P403 - Store in a well-ventilated place

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other hazards which do not result in classification**

This product does not contain any known or suspected endocrine disruptors

## Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Water	7732-18-5	<91
Sodium acetate	127-09-3	4
Sodium chloride	7647-14-5	3
Glycine, N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trans-	13291-61-7	<1
Acetic acid	64-19-7	<1
Sodium fluoride	7681-49-4	<0.1
C.I. Acid blue 9, disodium salt	3844-45-9	<0.1

## Section 4 - First Aid Measures

**Description of first aid measures****New Zealand Emergency Tel.**CHEMTREC®  
09 980 6780 or +64 9 980 6780**Inhalation**

Remove to fresh air.

**Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated

---

	clothes and shoes.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.
<b>Most important symptoms and effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically.

## **Section 5 - Fire Fighting Measures**

### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### **Extinguishing media which must not be used for safety reasons**

No information available.

### **Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors.

### **Hazardous Combustion Products**

None under normal use conditions.

### **Special protective equipment and precautions for fire fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## **Section 6 - Accidental Release Measures**

### **Personal Precautions, Protective Equipment and Emergency Procedures**

#### **Emergency procedures**

Ensure adequate ventilation.

#### **Environmental Precautions**

See Section 12 for additional Ecological Information.

#### **Precautions to prevent secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations

#### **Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

## **Section 7 - Handling and Storage**

### **Precautions for Safe Handling**

#### **Advice on safe handling**

Ensure adequate ventilation.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

**Conditions for Safe Storage, Including any Incompatibilities****Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place.

**Incompatible Materials**

None known.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

**Section 8 - Exposure Controls and Personal Protection****Control parameters****Exposure limits**

**NZ** - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

**UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia

**ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

Component	New Zealand WEL	Australia	ACGIH TLV	The United Kingdom
Acetic acid	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> STEL: 15 ppm STEL: 37 mg/m <sup>3</sup>	STEL: 15 ppm STEL: 37 mg/m <sup>3</sup> TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	TWA: 10 ppm STEL: 15 ppm	STEL: 37 mg/m <sup>3</sup> STEL: 15 ppm TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>
Sodium fluoride		TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>	STEL: 7.5 mg/m <sup>3</sup> 15 min TWA: 2.5 mg/m <sup>3</sup> 8 hr

**Biological limit values**

**ACGIH** - American Conference of Governmental Industrial Hygienists (ACGIH) TLVs® and BEIs®- Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices. 2022 Edition

Component	New Zealand	Australia	ACGIH - Biological Exposure Indices	United Kingdom
Sodium fluoride			2 mg/L Medium: urine Time: prior to shift Determinant: Fluoride 3 mg/L Medium: urine Time: end of shift Determinant: Fluoride	

**Appropriate engineering controls****Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Individual protection measures, such as personal protective equipment****Eye Protection**

Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Disposable gloves.	See manufacturers recommendations	-	AS/NZS 2161	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.  
(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### Skin and body protection

Long sleeved clothing

#### Respiratory Protection

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices (or AUS/NZ equivalent)  
When RPE is used a face piece Fit Test should be conducted

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

#### Environmental exposure controls

No information available.

## Section 9 - Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid	
<b>Appearance</b>	Red Green Blue	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	3.8	
<b>Melting Point/Range</b>	No data available	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	100 °C / 212 °F	
<b>Flammability (liquid)</b>	No data available	
<b>Flammability (solid,gas)</b>	Not applicable	Liquid
<b>Explosion Limits</b>	No data available	
<b>Flash Point</b>	Not applicable	<b>Method -</b> No information available
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	No data available	
<b>Viscosity</b>	No data available	
<b>Water Solubility</b>	Soluble in water	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Component</b>	<b>log Pow</b>	
Sodium acetate	-4.22	
Acetic acid	-0.2	
C.I. Acid blue 9, disodium salt	-6.4	
<b>Vapor Pressure</b>	No data available	
<b>Density / Specific Gravity</b>	No data available	
<b>Bulk Density</b>	Not applicable	Liquid
<b>Vapor Density</b>	No data available	(Air = 1.0)
<b>Particle characteristics</b>	Not applicable (liquid)	

### Other information

## Section 10 - Stability and Reactivity

#### Reactivity

None known, based on information available

<b>Stability</b>	Stable under normal conditions.
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available
<b>Hazardous Polymerization</b>	No information available.
<b>Hazardous Reactions</b>	No information available.
<b>Conditions to Avoid</b>	Heat, flames and sparks.
<b>Incompatible Materials</b>	None known.

**Hazardous Decomposition Products** None under normal use conditions.

## Section 11 - Toxicological Information

### Acute Effects

#### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Not an expected route of exposure.
<b>Eyes</b>	Not an expected route of exposure.
<b>Skin</b>	No known effect based on information supplied.
<b>Ingestion</b>	Not an expected route of exposure.

#### Numerical measures of toxicity

##### (a) acute toxicity;

<b>Oral</b>	Based on available data, the classification criteria are not met
<b>Dermal</b>	Based on available data, the classification criteria are not met
<b>Inhalation</b>	Based on available data, the classification criteria are not met

#### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Sodium acetate	LD50 = 3530 mg/kg ( Rat )	LD50 > 10 g/kg ( Rabbit )	LC50 > 30 g/m <sup>3</sup> ( Rat ) 1 h
Sodium chloride	LD50 = 3 g/kg ( Rat )	LD50 > 10000 mg/kg ( Rabbit )	LC50 > 42 mg/L ( Rat ) 1 h
Acetic acid	3310 mg/kg ( Rat )	-	> 40 mg/L ( Rat ) 4 h
Sodium fluoride	LD50 = 52 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	
C.I. Acid blue 9, disodium salt	LD50 > 2 g/kg ( Rat )		

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

##### (d) respiratory or skin sensitization;

<b>Respiratory</b>	No data available
<b>Skin</b>	No data available

Component	Test method	Test species	Study result
C.I. Acid blue 9, disodium salt 3844-45-9 ( <0.1 )	OECD Test Guideline 429 Local Lymph Node Assay	mouse	non-sensitising

(e) germ cell mutagenicity; No data available

Component	Test method	Test species	Study result
C.I. Acid blue 9, disodium salt 3844-45-9 ( <0.1 )	in vivo	mouse	negative

(f) carcinogenicity; No data available

Component	Test method	Test species / Duration	Study result
C.I. Acid blue 9, disodium salt 3844-45-9 ( <0.1 )	OECD Test Guideline 453	mouse	NOAEL = > 7000 mg/kg

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

**Symptoms / effects, both acute and delayed**

No information available.

## Section 12 - Ecological Information

### Ecotoxicity

#### Aquatic ecotoxicity

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Sodium acetate	LC50: > 100 mg/L, 96h semi-static (Danio rerio)	EC50: > 1000 mg/L, 48h (Daphnia magna)	-	= 7200 mg/L EC50 Pseudomonas putida 18 h
Sodium chloride	Pimephals promelas: LC50: 7650 mg/L/96h	EC50: 1000 mg/L/48h		
Acetic acid	Pimephales promelas: LC50 = 88 mg/L/96h Lepomis macrochirus: LC50 = 75 mg/L/96h	EC50 = 95 mg/L/24h	-	Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/5 min
Sodium fluoride	Lepomis macrochirus: 530 mg/L LC50 96 h (static) 830 mg/L LC50 96 h (semi-static) Pimephales promelas: 180 mg/L LC50 96 h Oncorhynchus mykiss: 38 - 68 mg/L LC50 96 h	338 mg/L EC50 = 48 h 98 mg/L EC50 = 48 h (static)	EC50: = 850 mg/L, 72h static (Desmodesmus subspicatus) EC50: = 272 mg/L, 96h (Pseudokirchneriella subcapitata)	-
C.I. Acid blue 9, disodium salt	LC50 > 100 mg/L, 96h Golden orfe	EC50 > 1000 mg/L, 48h Daphnia magna	EC50 > 200 mg/L	EC50 > 10,000 mg/L

**Terrestrial ecotoxicity**

Component	Earthworm	Avian	Honeybees
Sodium chloride	Acute toxicity: LC50 0.1 - 1 mg/cm2 (Eisenia foetida, 48 h, filter paper)		

**Persistence and Degradability**

**Persistence** Soluble in water, Persistence is unlikely, based on information available.

**Bioaccumulative Potential** Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Sodium acetate	-4.22	<10 dimensionless
Acetic acid	-0.2	No data available
C.I. Acid blue 9, disodium salt	-6.4	No data available

**Mobility** The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

**Other adverse effects**

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

**Waste treatment methods**

**Waste from Residues/Unused Products** Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## Section 14 - Transport Information

Component	Hazchem Code
Acetic acid	2P
64-19-7 ( <1 )	2R
Sodium fluoride	2Z
7681-49-4 ( <0.1 )	

**NZS 5433:2020** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated



Environmental hazards	No hazards identified
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable, packaged goods
Special Precautions	No special precautions required. Please refer to the applicable dangerous goods regulations for additional information.
Additional information	None known

## Section 15 - Regulatory Information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

HSNO Approval Number	HSR002596
----------------------	-----------

#### National Regulations

There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

#### Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information. Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information.

#### Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

### International Regulations

Ozone Depletion Potential	This product does not contain any known or suspected substance
Persistent Organic Pollutant	This product does not contain any known or suspected substance
Rotterdam Convention (PIC)	Not applicable

#### Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Acetic acid	-	Use restricted. See item 75. (see link for restriction details)	-
Sodium fluoride	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

### International Inventories

New Zealand (NZIoC), Australia (AICS), Europe (EINECS/ELINCS/NLP), Korea (KECL), China (IECSC), Taiwan (TCSI), Japan (ENCS), Japan (ISHL), Canada (DSL/NDL), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	NZIoC	AICS	EINECS	ELINCS	NLP	KECL	IECSC	TCSI
Water	7732-18-5	X	X	231-791-2	-	-	KE-35400	X	X
Sodium acetate	127-09-3	X	X	204-823-8	-	-	KE-00061	X	X
Sodium chloride	7647-14-5	X	X	231-598-3	-	-	KE-31387	X	X
Glycine, N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trans-	13291-61-7	X	-	236-308-9	-	-	2005-3-3174	X	X
Acetic acid	64-19-7	X	X	200-580-7	-	-	X	X	X
Sodium fluoride	7681-49-4	X	X	231-667-8	-	-	KE-31540	X	X
C.I. Acid blue 9, disodium salt	3844-45-9	X	X	223-339-8	-	-	KE-13703	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	PICCS	ISHL	ENCS
Water	7732-18-5	X	ACTIVE	X	-	X	-	X
Sodium acetate	127-09-3	X	ACTIVE	X	-	X	X	X
Sodium chloride	7647-14-5	X	ACTIVE	X	-	X	X	X
Glycine, N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trans-	13291-61-7	X	ACTIVE	X	-	X	-	-
Acetic acid	64-19-7	X	ACTIVE	X	-	X	X	X
Sodium fluoride	7681-49-4	X	ACTIVE	X	-	X	X	X
C.I. Acid blue 9, disodium salt	3844-45-9	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

## Section 16 - Other Information

This safety data sheet complies with the requirements of the EPA Hazardous Substances (Hazard Classification) Notice 2020 and WorkSafe New Zealand Regulations

### 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

**IECSC** - Chinese Inventory of Existing Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**NZS 5433:2020** - Transport of Dangerous Goods on Land

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**WEL** - Workplace Exposure Limit

**DNEL** - Derived No Effect Level

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**VOC** - (Volatile Organic Compound)

**AICS** - Australian Inventory of Chemical Substances

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**CAS** - Chemical Abstracts Service

**ACGIH** - American Conference of Governmental Industrial Hygienists

**PNEC** - Predicted No Effect Concentration

**OECD** - Organisation for Economic Co-operation and Development

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**ADG** - Australian Code for the Transport of Dangerous Goods by Road and Rail

**LC50** - Lethal Concentration 50%

**ATE** - Acute Toxicity Estimate

**RPE** - Respiratory Protective Equipment

**NOEC** - No Observed Effect Concentration

**BCF** - Bioconcentration factor

**PBT** - Persistent, Bioaccumulative, Toxic

### Key literature references and sources for data

HSNO classifications provided in the New Zealand Chemical Classification Information Database (CCID).

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

EPA Guide to classifying hazardous substances in New Zealand

EPA - Assigning a product to an existing HSNO approval guide

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards

On basis of test data

Health Hazards

Calculation method

---

**Environmental hazards**

Calculation method

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**Revision Date**

14-Jul-2023

**Revision Summary**

Update to GHS format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

## End of Safety Data Sheet