



## Safety Data Sheet

Date of Issue: 05.10.2021

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### 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Company Name** : ECP Limited  
**Address** : PO Box 34125, Birkenhead, Auckland 0746  
**Telephone** : +64 9 480 4386  
**Facsimile** : +64 9 480 4385  
**Emergency phone number** : 0800 243 622 (24 hours)

<b>Product Name</b>	<b>Sodium Fluoride</b>
<b>Product Code</b>	<b>47001 , 47008</b>
<b>CAS No.</b>	<b>7681-49-4</b>

**Recommended use** : Laboratory Investigations

### 2: Hazard's identification

#### 2.1 GHS Classification

Acute toxicity, Oral (Category B), H300  
Skin irritation (Category A), H315  
Eye irritation (Category A), H319  
Aquatic toxicity (Acute or Chronic) (Category D), H402

#### 2.2 GHS Label elements, including precautionary statements

##### Pictogram



**Signal word** : **Danger**

##### Hazard statement(s)

H300 Fatal if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H402 Harmful to aquatic life.

##### Precautionary statement(s)

###### Prevention

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.

##### Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
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.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

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

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

P362 Take off contaminated clothing and wash before reuse.

### Storage

P405 Store locked up.

### Disposal

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

## 2.3 Other hazards

Strong hydrogen fluoride-releaser

## 3: Composition/information on ingredients

### 3.1 Substances

Formula : FNa  
Molecular weight : 41.99 g/mol  
CAS-No. : 7681-49-4  
EC-No. : 231-667-8  
Index-No. : 009-004-00-7

Component	Classification	Concentration
Sodium Fluoride		
	6.1 C; 6.3 A; 6.4 A; H301, H315, H319	<= 100 %

## 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases.

More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for since they can occur after exposure.

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

First treatment with calcium gluconate paste.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

### **In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

### **If swallowed**

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

### **4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available

## **5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

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

#### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### **5.2 Special hazards arising from the substance or mixture**

Hydrogen fluoride

Sodium oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

### **5.3 Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### **5.4 Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 6.4 Reference to other sections

For disposal see section 13.

## 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Moisture sensitive. Do not store in glass

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Sodium Fluoride	7681-49-4	WES-TWA	2.5 mg/m <sup>3</sup>	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Exposure can also be estimated by biological monitoring		

#### Biological Occupational exposure limits

Component	CAS No.	Parameters	Value	Biological specimen	Basis
Sodium Fluoride	7681-49-4	Fluoride	2 mg/l	Urine	New Zealand. Biological Exposure indices
		Remarks	Prior to Shift		
		Fluoride	3 mg/l	Urine	New Zealand. Biological Exposure indices
			End of Shift		

### 8.2 Exposure controls

#### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

## Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

## 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance		
Form	:	crystalline
Color	:	white
b) Odor	:	No data available
c) Odor Threshold	:	No data available
d) pH	:	No data available
e) Melting point/freezing point		
Melting point/range	:	993 °C
f) Initial boiling point and boiling range	:	No data available
g) Flash point	:	No data available
h) Evaporation rate	:	No data available
i) Flammability (solid, gas)	:	The product is not flammable.
j) Upper/lower flammability or explosive limits	:	No data available
k) Vapor pressure	:	1.9 hPa
l) Vapor density	:	No data available
m) Relative density	:	No data available
n) Water solubility	:	No data available
o) Partition coefficient: n-octanol/water	:	No data available
p) Autoignition temperature	:	No data available
q) Decomposition temperature	:	No data available
r) Viscosity		
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
s) Explosive properties	:	No data available
t) Oxidizing properties	:	No data available

### 9.2 Other safety information

No data available

## 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Contact with acids liberates very toxic gas.

#### 10.4 Conditions to avoid

Exposure to moisture.  
Reacts dangerously with glass.

#### 10.5 Incompatible materials

glass

#### 10.6 Hazardous decomposition products

In the event of fire: see section 5

### 11: Toxicological information

#### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 148.5 mg/kg  
(US-EPA)

Remarks: (ECHA)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Irritating to skin.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation - 24 h

Remarks: Moderate eye irritation

Respiratory or skin sensitization

Buehler Test - Guinea pig

Result: negative

Remarks: (ECHA)

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test):

Metabolic activation: without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: Genotoxicity in vivo

Species: Mouse

Application Route: Oral

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure  
No data available

Aspiration hazard  
No data available

### 11.2 Additional Information

RTECS: WB0350000

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.  
prolonged or repeated exposure can cause:, Damage to the lungs.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Liver - Irregularities - Based on Human Evidence

## 12: Ecological information

### 12.1 Toxicity

Toxicity to fish

mortality NOEC - *Cyprinodon variegatus* (sheepshead minnow) – 500 mg/l - 96 h

LC50 - *Gambusia affinis* (Mosquito fish) - 925 mg/l - 96 h

Remarks: (IUCLID)

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 200 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 338 mg/l - 48 h

Remarks: (IUCLID)

Toxicity to algae

IC50 - *Desmodesmus subspicatus* (green algae) - 850 mg/l - 72 h

Remarks: (IUCLID)

Toxicity to bacteria

EC0 - *Pseudomonas putida* - 231 mg/l - 16 h

Remarks: (referred to the anion)

(Maximum permissible toxic concentration)

(IUCLID)

EC50 - activated sludge - 2,930 mg/l - 3 h

(ISO 8192)

Remarks: (IUCLID)

### 12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

Bioaccumulation *Salmo trutta* - 10 d - 5 mg/l(sodium fluoride)

Bioconcentration factor (BCF): 2.3

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

No data available

## 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

## 14: Transport Information Table

		<b>ADR/RID – European packaging certification</b>	<b>IMDG International Maritime Dangerous Goods Code</b>	<b>IATA – DGR International Air Travel Association – Dangerous Goods Regulations</b>
14.1	<b>UN Number</b>	1690	1690	1690
14.2	<b>UN Proper Shipping name</b>	SODIUM FLUORIDE, SOLID	SODIUM FLUORIDE, SOLID	Sodium fluoride, solid
14.3	<b>Transport Hazard Class</b>	6.1	6.1	6.1
14.4	<b>Packaging group</b>	III	III	III
14.5	<b>Environmental Hazards</b>	No	No	No
14.6	<b>Special precautions for user</b>	none		
14.7	<b>Incompatible materials</b>	Glass		
14.8	<b>Hazchem Code</b>	2Z		

## 15: Regulatory information

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

#### National regulatory information

HSNO Approval Code: HSR003112

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

## 16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied,



with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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