

**SAFETY DATA SHEET**

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 06/17/2018

Version 1.5

**SECTION 1. Identification****Product identifier**

Product number	SX0550
Product name	Sodium Fluoride GR ACS
CAS-No.	7681-49-4

**Relevant identified uses of the substance or mixture and uses advised against**

Identified uses	Reagent for analysis
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**Details of the supplier of the safety data sheet**

Company	Millipore (Canada) Ltd   109 Woodbine Downs Blvd. Unit 5   Etobicoke   Ontario M9W 6Y1   Canada   General Inquiries: +1 800-645-5476   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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<b>Emergency telephone</b>	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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**SECTION 2. Hazards identification****GHS Classification**

Acute toxicity, Category 3, Oral, H301  
Skin irritation, Category 2, H315  
Eye irritation, Category 2A, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

**GHS-Labeling***Hazard pictograms**Signal Word*

Danger

*Hazard Statements*

H301 Toxic if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

# SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

---

## *Precautionary Statements*

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/ eye protection/ face protection.

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.

P405 Store locked up.

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

## **Other hazards**

None known.

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## **SECTION 3. Composition/information on ingredients**

Formula NaF FNa (Hill)

Molar mass 41.98 g/mol

## **Hazardous ingredients**

*Chemical name (Concentration)*

CAS-No.

*Sodium fluoride (>= 90 % - <= 100 % )*

7681-49-4

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## **SECTION 4. First aid measures**

### **Description of first-aid measures**

*General advice*

Countermeasurements must be implemented at once.

*Inhalation*

After inhalation: fresh air.

*Skin contact*

After contact with skin: Rinse with plenty of water for at least 10 minutes. Immediately remove contaminated clothes. Apply calcium gluconate gel (preparation: boil 5 g of calcium gluconate in 85 ml of hot distilled water, add 10 g glycerol. Allow 5 g of Carmellose-sodium to swell in the hot solution. Stable for 6 months, store in a cool place) and massage into the skin until the pain subsides, in between rinse with water and apply fresh gel. Continue gel therapy for another 15 minutes after the pain has subsided. If no calcium gluconate gel is available, apply several dressings thoroughly moistened with 20 % calcium gluconate solution. Medical advice absolutely required!

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## SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

---

### *Eye contact*

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

### *Ingestion*

After swallowing: Immediately give to drink plenty of water, add calcium (in the form of calcium gluconate or calcium lactate). Caution: In the case of vomiting risk of perforation! Administer more calcium gluconate solution. Laxative: Sodium sulfate (1 tablespoon/1/4 l water). Seek medical advice immediately. Ensure that injured persons remain calm and protect them against heat loss.

Never give anything by mouth to an unconscious person.

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

Risk of corneal clouding.

The following applies to soluble inorganic fluorides in general: may cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effect: drop in blood calcium level, agitation, spasms, cardiovascular disorders, CNS disorders.

Irritation and corrosion, Cough, respiratory arrest, Convulsions, Nausea, Unconsciousness, death

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

Note for the doctor: It is recommended to consult a doctor with experience in the treatment of lesions caused by hydrofluoric acid. If a systemic effect is suspected, monitoring and treatment in an intensive care unit is urgently required. Caution, ventricular fibrillation due to electrolyte imbalance.

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## **SECTION 5. Fire-fighting measures**

### **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.

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

Not combustible.

Ambient fire may liberate hazardous vapors.

Fire may cause evolution of:

Hydrogen fluoride

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

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

#### *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.

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## **SECTION 6. Accidental release measures**

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

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# SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

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.

Advice for emergency responders:

Protective equipment see section 8.

## Environmental precautions

Do not let product enter drains.

## 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.

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## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

### Conditions for safe storage, including any incompatibilities

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

Store at room temperature.

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
<i>Sodium fluoride 7681-49-4</i>			
CAD AB OEL	Time Weighted Average (TWA):	2.5 mg/m <sup>3</sup>	Expressed as: as F
CAD BC OEL	Time Weighted Average (TWA):	2.5 mg/m <sup>3</sup>	Expressed as: as F
CAD MB OEL	Time Weighted Average (TWA):	2.5 mg/m <sup>3</sup>	Expressed as: as F
CAD ON OEL	Time Weighted Average (TWAEV):	2.5 mg/m <sup>3</sup>	Expressed as: as F
OEL (QUE)	Time Weighted Average (TWA):	2.5 mg/m <sup>3</sup>	Expressed as: as F

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

# SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

---

### *Hygiene measures*

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

### *Eye/face protection*

Safety glasses

### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### *Other protective equipment:*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter B-(P3)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

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## SECTION 9. Physical and chemical properties

Physical state	crystals
Color	colorless
Odor	odorless
Odor Threshold	Not applicable
pH	ca. 10.2 at 40 g/l 68 °F (20 °C)

# SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

---

Melting point	1825 °F (996 °C) at 1,013 hPa
Boiling point/boiling range	3,083 °F (1,695 °C) at 1,013 hPa
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	1 hPa at 1,971 °F (1,077 °C)
Relative vapor density	No information available.
Density	2.8 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	42 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	Not applicable for inorganic substances
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	Not applicable

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## SECTION 10. Stability and reactivity

### Reactivity

See below

### Chemical stability

## SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

---

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

### Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with:

acids

Possible formation of:

Hydrogen fluoride

### Conditions to avoid

no information available

### Incompatible materials

glass, various metals

### Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Eye contact, Skin contact, Ingestion

#### *Acute oral toxicity*

LD50 Rat: ca. 148.5 mg/kg

US-EPA

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

#### *Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations, Cough, After a latency period:, Lung edema

#### *Acute dermal toxicity*

LD50 Rat: > 2,000 mg/kg

US-EPA

#### *Skin irritation*

Causes skin irritation.

Causes poorly healing wounds.

#### *Eye irritation*

Causes serious eye irritation.

Risk of corneal clouding.

#### *Sensitization*

Buehler Test Guinea pig

Result: negative

Method: US-EPA

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Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

---

### *Genotoxicity in vivo*

Chromosome aberration test

Mouse

Result: negative

Method: US-EPA

### *Genotoxicity in vitro*

In vitro mammalian cell gene mutation test

Chinese hamster lung cells

Result: negative

(ECHA)

Ames test

Salmonella typhimurium

Result: negative

(ECHA)

### *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

### *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## **Further information**

Decomposition of the substance with tissue moisture.

After absorption:

Systemic effects:

Cardiac irregularities, Nausea, respiratory arrest, Convulsions, Unconsciousness, death

The following applies to soluble inorganic fluorides in general: may cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effect: drop in blood calcium level, agitation, spasms, cardiovascular disorders, CNS disorders.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.



## SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Product number

SX0550

Version 1.5

Product name

Sodium Fluoride GR ACS

---

### SECTION 12. Ecological information

#### Ecotoxicity

##### *Toxicity to fish*

LC50 Oncorhynchus mykiss (rainbow trout): 108 mg/l; 96 h

Analytical monitoring: yes(ECHA)

##### *Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia magna (Water flea): 338 mg/l; 48 h (IUCLID)

EC5 E.sulcatum: 101 mg/l(maximum permissible toxic concentration) (Hommel)

##### *Toxicity to algae*

IC50 Desmodesmus subspicatus (green algae): 850 mg/l; 72 h (IUCLID)

##### *Toxicity to bacteria*

EC0 Pseudomonas putida: 231 mg/l; 16 h (referred to the anion) (maximum permissible toxic concentration) (IUCLID)

EC50 activated sludge: 2,930 mg/l; 3 h

ISO 8192 (IUCLID)

##### *Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)*

static test NOEC Daphnia magna (Water flea): 8.9 mg/l; 21 d (ECHA)

#### Persistence and degradability

##### *Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

#### Bioaccumulative potential

##### *Partition coefficient: n-octanol/water*

Not applicable for inorganic substances

#### Mobility in soil

No information available.

##### *Additional ecological information*

Hazard for drinking water supplies.

Discharge into the environment must be avoided.

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### SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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Product number  
Product name

SX0550  
Sodium Fluoride GR ACS

Version 1.5

---

**SECTION 14. Transport information**

**Land transport (DOT)**

UN number UN 1690  
Proper shipping name SODIUM FLUORIDE, SOLID  
Class 6.1  
Packing group III  
Environmentally hazardous --

**Air transport (IATA)**

UN number UN 1690  
Proper shipping name SODIUM FLUORIDE, SOLID  
Class 6.1  
Packing group III  
Environmentally hazardous --  
Special precautions for user no

**Sea transport (IMDG)**

UN number UN 1690  
Proper shipping name SODIUM FLUORIDE, SOLID  
Class 6.1  
Packing group III  
Environmentally hazardous --  
Special precautions for user yes  
EmS F-A S-A

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**SECTION 15. Regulatory information**

**United States of America**

**Canada**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**Notification status**

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

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**SECTION 16. Other information**

**Training advice**

Provide adequate information, instruction and training for operators.

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SX0550

Version 1.5

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Sodium Fluoride GR ACS

---

## Labeling

*Hazard pictograms*



*Signal Word*

Danger

*Hazard Statements*

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

EUH032 Contact with acids liberates very toxic gas.

*Precautionary Statements*

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.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

## Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 06/17/2018

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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