SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product Name	:	0.8 M Sodium fluoride
Product Number	:	HR2-645
REACH No.	:	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS Number	:	7681-49-4

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

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Details of the supplier of the Safety Data Sheet

Company : Hampton Research
34 Journey
Aliso Viejo, CA 92656-3317
United States

Telephone : 949 425 1321
Telephone technical support is available 8:00 a.m. to 4:30 p.m. USA Pacific Standard Time.

Fax : 949 425 1611
Fax Technical Support is available 24 hours a day.

e-mail : tech@hrmail.com
e-mail Technical Support is available 24 hours a day.

1.4 Emergency telephone number

Emergency phone : 949 425 1321
For **CHEMTREC** Assistance : 800 424 9300
For **CHEMTREC** Assistance : 703 527 3887 (International)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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

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

(CONTINUED) - SECTION 2: Hazards Identification

Classification according to EU Directives 67/548/EEC or 1999/45/EC

T	Toxic	R25
Xi	Irritant	R36/38

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram :

Signal word : Danger

Hazard statement(s)

H301 : Toxic if swallowed.

H315 : Causes skin irritation.

H319 : Causes serious eye irritation.

Precautionary statement(s)

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

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

Supplemental Hazard information (EU) EUH032 : Contact with acids liberates very toxic gas.

2.3 Other hazards - none

SECTION 3: Composition/Information on Ingredients

3.1 Substances

Synonym	: none
Formula	: NaF
Molecular Weight	: 41.99
CAS Number	: 7681-49-4
EC Number	: 231-667-8

RTECS	Merck	Beilstein	SARA	MDL #	PubChem Substance ID
WB0350000	14,8618	N/A	No	MFCD00003524	24886216

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Sodium fluoride		
	Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; H301, H315, H319, EUH032	-

(CONTINUED) - SECTION 3: Composition/Information on Ingredients

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Sodium fluoride		
	T, R25 - R32 - R36/38	-

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance.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.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes as a precaution and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. The most important known symptoms and effects are described in the labeling (see Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Dry powder

(CONTINUED) - SECTION 5: Fire Fighting Measures

5.2 Special hazards arising from the substance or mixture

no data available

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further Information

The product itself does not burn.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and Storage

7.1 Personal Precautions

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Normal measures for preventive fire protection.

For precautions see section 2.2. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

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

Never allow product to get in contact with water during storage. Do not store near acids.

Moisture sensitive.

7.3 Specific end use(s)

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

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

(CONTINUED) - SECTION 8: Exposure Controls/Personal Protection

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, 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 N100 (US) or type P3 (EN 143) 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 such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: Fine Powder	Color: White
b)	Odor	no data available	
c)	Odor Threshold	no data available	
d)	pH	9.9 at 25°C	
e)	Melting point/freezing point	993°C (lit.)	
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)	no data available	
j)	Upper/lower flammability or explosive limits	no data available	
k)	Vapor pressure	1.4 mm Hg (0°C)	
l)	Vapor density	no data available	
m)	Relative density	no data available	
n)	Water solubility	no data available	
o)	Partition coefficient: noctanol/water	no data available	
p)	Autoignition temperature	no data available	
q)	Decomposition temperature	no data available	
r)	Viscosity	no data available	
s)	Explosive properties	no data available	
t)	Oxidizing properties	no data available	

9.2 Other safety information

Surface tension no data available

SECTION 10: Stability and Reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Exposure to moisture.

10.5 Incompatible materials

Strong acids

(CONTINUED) - SECTION 10: Stability and Reactivity

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 31 mg/kg

LD50 Oral - mouse - 44 mg/kg

LD50 Oral - rabbit - 200 mg/kg

LD50 Oral - Domestic Animals - 100 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity). Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

LD50 Oral - Bird (wild) - 110 mg/kg

TDLo Oral - Human - 0,214 mg/kg
Remarks: Behavioral:Headache. Gastrointestinal:Changes in structure or function of salivary glands.

TDLo Oral - Human - 3,57 mg/kg
Remarks: Gastrointestinal:Changes in structure or function of salivary glands. Gastrointestinal:Other changes.

TDLo Oral - Human - male - 1.662 mg/kg

TDLo Oral - Human - female - 7 mg/kg
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Ptosis. Cyanosis

TDLo Oral - mouse - 0,0084 mg/kg
Remarks: Gastrointestinal:Decreased motility or constipation.

TDLo Oral - mouse - 0,034 mg/kg

LDLO Oral - Human - 71 mg/kg
Remarks: Behavioral:Tremor. Musculoskeletal:Changes in teeth and supporting structures. Musculoskeletal:Other changes.

LDLO Oral - Human - 32 mg/kg

LDLO Oral - Human - 0,07 mg/kg
Remarks: Cardiac:Arrythmias (including changes it conduction). Peripheral Nerve and Sensation:Recording from peripheral motor nerve.

LDLO Oral - Human - female - 90 mg/kg
Remarks: Behavioral:Fluid intake. Behavioral:Muscle weakness.

LDLO Oral - Human - female - 360 mg/kg
Remarks: Cyanosis

TDLo Intradermal - Human - 0,014 mg/kg
Remarks: Peripheral Nerve and Sensation:Paresthesis.

TDLo Parenteral - rat - 9 mg/kg
Remarks: Endocrine:Hyperglycemia. Blood:Changes in serum composition (e.g., TP, bilirubin, cholesterol). Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Hepatic microsomal mixed oxidase (dealkylation, hydroxylation, etc.).

TDLo Parenteral - rat - 35 mg/kg
Remarks: Vascular:BP lowering not charactertized in autonomic section. Kidney, Ureter, Bladder:Urine volume increased.

LDLO Subcutaneous - rabbit - 100 mg/kg

LDLO Subcutaneous - guinea pig - 100 mg/kg

LDLO Intraperitoneal - dog - 50 mg/kg

LDLO Subcutaneous - dog - 155 mg/kg

LDLO Subcutaneous - cat - 14 mg/kg

LD50 Intraperitoneal - rat - 22 mg/kg

LD50 Intravenous - rat - 26 mg/kg
Remarks: Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

LD50 Subcutaneous - rat - 175 mg/kg

LD50 Intraperitoneal - mouse - 38 mg/kg
Remarks: Gastrointestinal:Other changes. Liver:Other changes. Kidney, Ureter, Bladder:Other changes.

LD50 Intravenous - mouse - 50,83 mg/kg
Remarks: Liver:Other changes. Kidney, Ureter, Bladder:Other changes. Gastrointestinal:Other changes.

LD50 Subcutaneous - mouse - 0,115 mg/kg

LD50 Intravenous - Monkey - 26,6 mg/kg

Skin irritation / corrosion

no data available

Serious eye damage/eye irritation

Eyes - rabbit
Result: Eye irritation - 24 h
Remarks: Moderate eye irritation

Respiratory or skin sensitization

no data available

(CONTINUED) - SECTION 11: Toxicological Information

Germ cell mutagenicity

no data available

Chronic exposure

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium fluoride)

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

Signs and Symptoms of Exposure

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

Additional information

RTECS: WB0350000

Prolonged or repeated exposure can cause:, Damage to the lungs.

Liver - Irregularities - Based on Human Evidence

SECTION 12: Ecological Information

12.1 Toxicity

Toxicity to fish	mortality NOEC - Cyprinodon variegatus (sheepshead minnow) - 500 mg/l - 96 h
	LC50 - Oncorhynchus mykiss (rainbow trout) - 200 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 98 mg/l - 48 h

12.2 Persistence and degradability

Bioaccumulation	Salmo trutta - 10 d- 5 mg/l
	Bioconcentration factor (BCF): 2,3

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

(CONTINUED) - SECTION 12: Ecological Information

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

Harmful to aquatic life.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transportation Information

14.1 UN number

ADR/RID: 1690 IMDG: 1690 IATA: 1690

14.2 UN proper shipping name

ADR/RID: SODIUM FLUORIDE, SOLID
IMDG: SODIUM FLUORIDE, SOLID
IATA: Sodium fluoride, solid

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

no data available

SECTION 15: Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No 1907/2006.

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

no data available

15.2 Chemical Safety Assessment

no data available

SECTION 16: Other Information

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
EUH032	Contact with acids liberates very toxic gas.
Eye Irrit.	Eye irritation
H301	Toxic if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Full text of R-phrases referred to under sections 2 and 3

T	Toxic
R25	Toxic if swallowed.
R32	Contact with acids liberates very toxic gas.
R36/38	Irritating to eyes and skin.

DISCLAIMER

For research use only. Not for drug, household, or other use.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of this product. Hampton Research Corp., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

License granted to make unlimited paper copies for internal use only.