

Safety Data Sheet


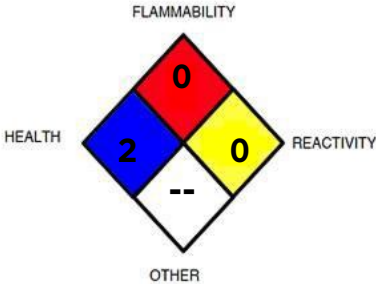
Section 1: Product & Company Identification

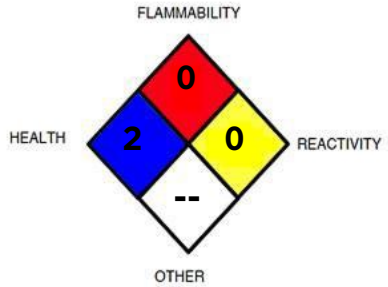
Product Name:	Sodium Fluoride, ACS Grade
Product #:	S-2367
Synonyms:	Florocid, Pediaflor; Zymafluor
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS#	EC #	% Composition
Sodium Fluoride	7681-49-4	231-667-8	≥99.0

Section 3: Hazards Identification

Symbols	
HMIS Classification	<p>FLAMMABILITY</p>  <p>HEALTH REACTIVITY</p> <p>OTHER</p>

NFPA Classification	
----------------------------	---

Section 4: First Aid Measures

General Overview:	<p>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. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.</p>
Inhalation:	<p>If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.</p>
Skin:	<p>Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician. First treatment with calcium gluconate paste.</p>
Eyes:	<p>Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.</p>
Ingestion:	<p>Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.</p>
	<p>See section 11 for more detailed information on health effects & symptoms.</p>

SECTION 5: Fire Fighting Measures

Flammability of the product:	<p>No data available</p>
Extinguishing Media:	<p>Dry powder</p>

Hazardous thermal (de)composition products:	No data available
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus for firefighting if necessary.
Flash Point:	No data available

Section 6: Accidental Release Measures


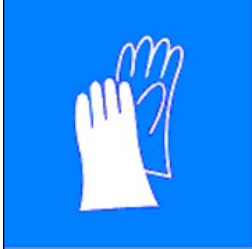

Personal Precautions:	Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods for Clean-up:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

SECTION 7: Handling & Storage

Storage:	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. Keep in a dry place. Do not store in glass.
Handling:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>In case of inadequate ventilation use suitable respirator.</p>
--------------------------------	---

Skin and Body:		 	
		Chemical resistant gloves. Wear suitable protective clothing.	
Eyes:			
		Wear safety glasses with side shields (or goggles) and a face shield.	
Ventilation/Engineering Measures:		Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.	
Hygiene:		Handle in accordance with good industrial hygiene and safety practice.	
Occupational Exposure Limits:			
Chemical Identity	Type	Exposure Limit Values	Source
Sodium fluoride - as F	TWA	2.5 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	REL	2.5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2.5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	2.5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Sodium fluoride - Dust	TWA	2.5 mg/m ³	US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
Sodium fluoride - as F	TWA	2.5 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Sodium fluoride	AN ESL	Vegetation 0.5 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)

	AN ESL	Animal	0.71 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	Health	17 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (06 2018)
	ST ESL	Vegetation	2.8 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (06 2018)
	AN ESL	Health	8.1 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Sodium fluoride - as F	TWA PEL		2.5 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Sodium fluoride (Fluoride: Sampling time: Prior to shift.)	2 mg/L (Urine)	ACGIH BEI (03 2013)
Sodium fluoride (Fluoride: Sampling time: End of shift.)	3 mg/L (Urine)	ACGIH BEI (03 2013)

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	White powder
Formula	NaF
Molecular Wt.	41.99
Melting Pt.	993°C
Boiling Pt.	No data available
Density:	No data available
Vapor Pressure:	1.9 hPa (1.4 mmHg)
Evaporation Rate:	No data available
Relative Density:	2.780 g/cm ³
Solubility:	Water
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Hazardous decomposition products:	Contact with acids liberates very toxic gas (hydrogen fluoride (HF)). Hazardous decomposition products formed under fire conditions (Hydrogen fluoride, Sodium oxides)
Materials to Avoid:	Strong acids, glass
Conditions to avoid:	Exposure to moisture. Reacts dangerously with glass.

SECTION 11: Toxicological Information

RTECS#:	WB0350000
ACUTE Toxicity:	LD50 Oral = 148.5 mg/kg (Rat - female) LD50 Intravenous = 26 mg/kg (Rat)
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	<p>This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.</p> <p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.</p> <p>ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>

SECTION 12: Ecological Information

Ecotoxicity:	<p>Toxicity to fish: mortality NOEC - <i>Cyprinodon variegatus</i> (sheepshead minnow) - 500 mg/L - 96h LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 200 mg/l - 96 h</p> <p>Toxicity to daphnia and other aquatic invertebrates: EC50 - <i>Daphnia magna</i> (Water flea) - 98 mg/l - 48 h</p>
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	Salmo trutta - 10 d - 5 mg/l Bioconcentration factor (BCF): 2.3
Other adverse effects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.
Corrosivity Characteristic:	Irritating to skin.
General Notes:	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. 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.

SECTION 14: Transportation Information

UN ID#:	1690
ADR / RID (LAND):	UN number: 1690 Class: 6.1 Packing group: III Proper shipping name: Sodium fluoride, solid Reportable Quantity (RQ): 1000 lbs Poison Inhalation Hazard: No
DOT regulations:	UN number: 1690 Class: 6.1 Packing group: III Proper shipping name: Sodium fluoride, solid Reportable Quantity (RQ): 1000 lbs Poison Inhalation Hazard: No
IMDG/IMO (SEA):	UN number: 1690 Class: 6.1 Packing group: III EMS-No: F-A, S-A Proper shipping name: SODIUM FLUORIDE, SOLID
IATA/DGR (AIR):	UN number: 1690 Class: 6.1 Packing group: III Proper shipping name: Sodium fluoride, solid
Special Provisions:	N/A

SECTION 15: Regulatory Information

Health Phrases:	H301 Toxic if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H402 Harmful to aquatic life
Risk Phrases:	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 eye protection/ face protection. P280 Wear protective gloves.

Safety Phrases:	<p>P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P332 + P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P337 + P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P362 Take off contaminated clothing and wash before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>
EU Regulations:	N/A
US Regulations:	<p>TSCA: No products listed</p> <p>California Proposition 65: No products listed</p> <p>Massachusetts State Right to Know: Listed</p> <p>New Jersey State Right to Know: Listed</p> <p>Pennsylvania State Right to Know: Listed</p>
U.S. Federal Regulations:	<p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: Acute Health Hazard, Chronic Health Hazard</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Acute toxicity, Oral (Category 3), Skin irritation (Category 2), Eye irritation (Category 2A), Acute aquatic toxicity (Category 3)</p>
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*