




**MATERIAL SAFETY DATA SHEET**

Boreal Laboratories Ltd.  
399 Vansickle Road  
St. Catharines, Ontario L2S 3T4

MSDS No. SS 535  
Effective Date December 4, 1992

SECTION I NAME		24 HOUR EMERGENCY ASSISTANCE	
Product	SODIUM FLUORIDE	 <p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4</p> <p>HMIS * Health 3 Fire 0 Reactivity 1</p>	
Chemical Synonyms	Sodium Fluoride		
Formula	NaF		
Unit(s) Size	100, 500 grams		
C.A.S. No.	7681-49-4		

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES		
Principal Hazardous Component(s)	%	TLV Units
Sodium Fluoride	100%	See Section V.
<p><b>DANGER!</b>  <b>POISON</b>  <b>MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES EYE BURNS</b></p>		

SECTION III PHYSICAL DATA			
Melting Point (°F)	993°C (1819°F)	Specific Gravity (H <sub>2</sub> O = 1)	2.558 at 41°C
Boiling Point (°F)	1704°C (3099°F)	Percent Volatile by Volume (%)	Negligible as solid.
Vapor Pressure (mm Hg)	1 mm at 1077°C	Evaporation Rate (-1)	Non-volatile (NA).
Vapor Density (Air=1)	1.45		
Solubility in Water	4.22 grams per 100 mL. water at 25°C.		
Appearance & Odor	White crystalline powder; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method Used)	Non-combustible (NA).	Flammable Limits in Air % by Volume	NA
Extinguisher Media	Water; dry chemical (ABC); carbon dioxide (CO <sub>2</sub> ); foam. Water spray would tend to reduce fumes and disperse vapors.		

**SPECIAL FIREFIGHTING PROCEDURES**

In fire conditions, wear a NIOSH-approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Dust presents a respiratory and eye hazard. Moderately water soluble.

(1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5, GUIDE PAGE NO. 54)

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Fire or excessive heat may produce hazardous decomposition products; can react vigorously with acid to liberate corrosive and toxic hydrogen fluoride.

D.O.T. SODIUM FLUORIDE, 6.1, UN 1690

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

**SECTION V HEALTH HAZARD DATA**

<b>Threshold Limited Value</b>	RTECS No. WB0350000 Toxicity data: Ori-rat LD <sub>50</sub> 64 mg/kg, ori-human LDLo 75 mg/kg. OSHA/TWA: 2.5 mg/m <sup>3</sup> (Fluorides as F).
<b>Effects of Overexposure</b>	<b>INHALATION:</b> Irritating to mucous membranes and toxic when inhaled. Chills, labored breathing, fever, unproductive cough. <b>SKIN:</b> May cause dermatitis if exposed to dust or fumes. <b>EYES:</b> Causes eye burns. <b>INGESTION:</b> Severe vomiting, abdominal distress, diarrhea, stupor, weakness. <b>POISON IF SWALLOWED OR INHALED.</b>
<b>Emergency and First Aid Procedures</b>	<b>INHALATION:</b> Remove from exposure, treat symptomatically, and get medical attention. <b>EYES:</b> Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get prompt medical attention. <b>SKIN:</b> Flush skin with plenty of water. If irritation develops, get medical attention. <b>INGESTION:</b> If swallowed, if conscious, immediately give several glasses of milk or other calcium containing liquid if available, otherwise give large amounts of water. Get immediate medical attention. Never give anything by mouth to an unconscious person. <b>NOTE TO PHYSICIAN:</b> Forms hydrofluoric acid upon contact with acid, such as stomach acid.

**SECTION VI REACTIVITY DATA**

<b>Stability</b>	Unstable Stable	Conditions to Avoid	X Moisture, extreme temperature and heat.
<b>Incompatibility (Materials to Avoid)</b>	Acids (reacts with acids to form corrosive and toxic hydrogen fluoride). Water forms solution corrosive to many materials, including glass.		
<b>Hazardous Decomposition Products</b>	Hydrogen Fluoride. The possibility of toxic/hazardous fumes of fluorine and sodium oxide should be considered.		
<b>Hazardous Polymerization</b>	May Occur Will Not Occur	Conditions to Avoid	X Not applicable.

**SECTION VII SPILL OR LEAK PROCEDURES**

<b>Steps to be taken in case material is released or spilled</b>	Recover for use if not contaminated. Avoid inhalation and skin contact. Wear suitable protective equipment. Sweep up and place in a suitable container for proper disposal, avoiding dusty conditions.
--	--

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of container and any residue according to local regulations.

**SECTION VIII SPECIAL PROTECTION INFORMATION**

<b>Respiration Protection (Specify Type)</b>	None needed in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH-approved respirator.		
<b>Ventilation</b>	Local Exhaust Mechanical (General)	Yes. Yes.	Special Other
<b>Protective Gloves</b>	Rubber.	<b>Eye Protection</b>	Chemical safety glasses.
<b>Other Protective Equipment</b>	Smock, apron, goggles, ventilation hood, proper gloves, eye wash station.		

**SECTION IX SPECIAL PRECAUTIONS**

<b>Precautions to be Taken in Handling &amp; Storing</b>	Store in a cool, dry place away from acids and acid fumes. Wash thoroughly after handling.
<b>Other Precautions</b>	Read label on container before using. Do not wear contact lenses when working with chemicals.
	Avoid inhalation and ingestion. Use adequate ventilation. Avoid contact with skin or eyes. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No.	No. 2	Date	12/4/92	Approved	Alexander A. Piccirilli	Chemical Safety Coordinator	AP
----------	-------	------	---------	----------	-------------------------	-----------------------------	----

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. \* Hazardous Materials Industrial Standards.