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Effective Date: 7/11/95
Product Name: Sodium Fluoride
Chemical Formula: NaF
CAS No.: 7681-49-4

Hazardous Ingredients:

Ingredients (CAS No.)	WT PCT (Approx)	PEL		TLV	
		<u>MG/M3</u>	<u>PPM</u>	<u>MG/M3</u>	<u>PPM</u>
Sodium Fluoride (7681-49-4)	90-95	2.5		2.5	

NE: Not established

*: As Fluoride

The TLV's are given for guidance; local applicable regulations should always be followed. Ingredients are those present at 1% or greater, or at 0.1% or greater if listed as potential carcinogens by OSHA/IARC/NTP. Proprietary ingredient identities are available in accordance with 29 CFR 1910.1200.

Carcinogen: NTP - Testing program; IARC-No; OSHA- No
ETP - Genetic Toxicology Program

Physical Data:

Boiling point, 760 mm hg	1700°C
Melting point/Freezing point (range) Approx.:	993°C
Specific Gravity (Water=1)	2.558 at 41°C
Vapor Pressure (mm hg)	1 at 1077°C
Vapor Density (Air=1)	N/A
Solubility in water (% by Weight):	4g/100 ml at 18°C
Volatiles (% by Weight)	N/A
PH of Solution	7.4
Odor:	Odorless
Physical form:	White crystals, or powder. Toxic

Fire and Explosion Information:

Flash point:	N/A
Extinguishing media to be recommended:	Use water spray. Remove containers from fire area if it can be done safely. Cool fire exposed containers with water spray until well after fire is out. Do not flush into sewer or stream.

Special Fire Fighting Procedures:	Wear full protective clothing and NIOSH approved self-contained breathing apparatus with full facepiece in the pressure demand or other positive
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operated
pressure mode.

Fire and explosions hazards:	Not considered to be a fire or explosion hazard. Not combustible. Emits toxic fumes of fluoride and sodium oxide when heated to decomposition.
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Reactivity Data: Stable X Unstable _____

Incompatibilities: Reacts with acids to form Hydrogen Fluoride.

Conditions to Avoid: Exposure to incompatibilities, heat; do not boil. Separate from acids and alkalis.

Hazardous Decomposition: Emits toxic fumes of fluorides and sodium oxide when heated to decomposition.

Hazardous Polymerization: Will not occur

Handling and Storage Information:

Precautionary Measures: Avoid contact with skin, eyes and clothing. Wear protective clothing, gloves, and splash goggles or shield. Wash thoroughly after using. Avoid breathing dust or mist. Use with adequate ventilation.

Keep in a tightly closed container. Store in a cool, dry, well ventilated area. Isolate from alkalis.

Protect from physical damage.

Leak/Spill Information:

Sweep, scoop, or pick up spilled material. Avoid dusting. Package for reclamation or recovery in dry containers. Whatever cannot be saved may be disposed of in an approved landfill. Do not flush into sewer or stream.

Disposal Information:

Dispose of in an approved chemical waste landfill in accordance with applicable federal, state and local regulation.

Environmental Information:

Superfund Reportable Quantity: 1000#/2270kg

Hazardous Waste No.: Not regulated

Sara Title III: Not subject to reporting

Canadian (WHMIS) List: This product is subject to reporting.

New Jersey List: Employers who produce, use, or store this product are required to fill out an annual survey due on March 1st of each year.

Transportation Data

Dot Shipping Name: Sodium Fluoride , Solid

Dot Hazard Class: 6.1

Hazard Identification: Serious Health Hazard

Identification Number: UN1690 *

Packing Group: III

Label: Toxic - Poison

For containers/packages exceeding 1000 lbs, RQ is required.

During an incident involving this product, use of DOT emergency response guide no.54 (version 1993) is also recommended.

Health Hazard Information:

A. Exposure/Health Effects

Effects of Overexposure:

Symptoms of Ingestion: TOXIC. May cause salivation, nausea, vomiting, diarrhea, and abdominal pain. Symptoms of weakness, tremors, shallow respiration, cardopedal spasm, convulsions, and coma may follow. May cause brain and kidney damage. Death may occur from respiratory and cardiac failure.

Inhalation: May cause corrosive effects to the respiratory tract. Symptoms may include coughing, sore throat, and labored breathing. May be absorbed through inhalation of dust. Symptoms may parallel those from ingestion exposure.

Symptoms of Skin Contact: May cause irritation, redness, and pain. Solutions are corrosive.

Symptoms of Eye Contact: EYE IRRITANT. Contact may cause conjunctivitis, ulceration, clouding of the cornea, or severe eye damage.

Chronic Exposure: Prolonged or repeated skin exposure may cause dermatitis. Repeated ingestion of small amounts may cause mottling of the teeth and bone damage (osteosclerosis).

Toxicity Data:

Oral Toxicity: LD50; 52 mg/kg (rat)

LD50; 71 mg/kg (human)
LD50; 75 mg/kg (dog)
LD50; 200 mg/kg (rabbit)
Intraperitoneal Toxicity: LD₅₀; 50 mg/kg (dog)
Subcutaneous Toxicity: LD₅₀; 155 mg/kg (dog)

B. First Aid:

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Do not induce vomiting. Immediately give two tablespoons of magnesium sulfate and a glass of water. Repeat three times. Follow with two tablespoons of Milk of Magnesia and a glass of water. Repeat these dosages in ten minutes. Get medical attention immediately.

Skin Contact: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Apply bandage soaked in Milk of Magnesia. Get medical attention immediately.

Eye Contact: Immediately, flush with large amounts of water for at least fifteen minutes while holding eyelids apart. Washing within one minute is essential to achieve maximum effectiveness. Continue washing for at least 15 minutes longer. Refer to ophthalmologist after first aid. Get medical attention immediately.

Notes to Physician : For pain, use 3 drops of 0.5% pontocaine in each eye.

Occupational Control Measures:

Airborne Exposure Limited:

Ventilation Systems: A system of local exhaust is recommended to keep employee exposure below the airborne exposure limits. Local exhaust is usually preferred because it controls the emission at its source, preventing dispersion of it into the general work area. Refer to the ACGIH document "Industrial Ventilation, a Manual of Recommended Practices" for details.

Personal Respirators: NIOSH/MSHA approved respirator if exposure may, or does exceed occupational exposure limits. Generally, a dust/mist respirator may be worn in areas where the TLV is exceeded up to ten times. Alternatively, a supplied air full facepiece respirator or airtight hood may be worn.

Skin Protection: Use rubber or plastic impervious gloves and body-covering clothing.

Eye Protection: Chemical splash goggles or face shield. Contact lenses should not be worn when working with this material.

Personal Hygiene: Wash thoroughly after handling.

An eye wash fountain and quick-drench facilities should be maintained in the work area
