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### **M.S.D.S. / Specification**

#### **1.SODIUM FLUORIDE**

##### **1. Product Identification**

CAS No.: 7681-49-4  
Molecular Weight: 41.99  
Chemical Formula: NaF

#### **2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent	Hazardous
Sodium Fluoride	7681-49-4	100%	Yes

#### **3. Hazards Identification**

**Inhalation:** Causes severe irritation 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. Irritation effects may not appear immediately.

**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. Affects heart and circulatory system. Death may occur from respiratory paralysis. Estimated lethal dose = 5-10 grams.

#### **4. First Aid Measures**

**Skin Contact:** Wipe off any excess material from skin and then immediately flush skin with large amounts of soapy water. Remove contaminated clothing and shoes. Wash clothing before re-use. Apply bandages soaked in magnesium sulfate. CALL A PHYSICIAN IMMEDIATELY.

**Eye Contact:** Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

#### **5. Fire Fighting Measures**

**Fire:** Not considered to be a fire hazard.  
Not considered to be an explosion hazard.

**Fire Extinguishing Media:** Use any means suitable for extinguishing surrounding fire.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Separate from acids and oxidizing materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## 8. Exposure Controls/Personal Protection

**Personal Respirators (NIOSH Approved):** If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

**WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

## 9. Physical and Chemical Properties

<b>Formula.</b>	NaF
<b>M.W.</b>	41.99
<b>Assay.</b>	98.00% Min
<b>Appearance:</b>	White Powder
<b>Odor:</b>	Odorless.
<b>Solubility:</b>	4 g/100 ml water @ 15C (59F)
<b>Specific Gravity:</b>	2.78
<b>% Volatiles by volume @ 21C (70F):</b>	0

**Boiling Point:** 1700C (3092F)

**Melting Point:** 993C (1819F)

**Vapor Pressure (mm Hg):** 1 @ 1077C (1971F)

### 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Burning may produce hydrogen fluoride vapors.

Incompatibilities: Reacts with acids to form hydrogen fluoride.

### 11. Toxicological Information

Ingredient	Known	Anticipated	IARC	Category
Sodium Fluoride	(7681-49-4)	No	No	None

### 12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l. LD50, oral (goat, sheep) 100 mg/kg; LD50, oral (wild bird) 110 mg/kg.

### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### 14. Transport Information

Proper Shipping Name: SODIUM FLUORIDE

Hazard Class: 6.1

UN/NA: UN1690

Packing Group: III

### 15. Regulatory Information

Ingredient	TSCA	EC	Japan	Australia
Sodium Fluoride (7681-49-4)	Yes	Yes	Yes	Yes

### 16. Other Information

#### Label First Aid:

In all cases call a physician immediately. First Aid procedures should be pre-planned for fluoride compound emergencies. If swallowed, administer milk, chewable calcium

carbonate tablets or milk of magnesia. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give artificial respiration. In case of skin contact wipe off any excess material then immediately flush skin with large amounts of soapy water. Remove contaminated clothing and shoes. Wash clothing before re-use. Apply bandages soaked in magnesium sulfate. In case of eye contact, immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting upper and lower eyelids occasionally.

**Product Use:**

Laboratory Reagent.