





Material Safety Data Sheet
Sodium fluoride MSDS

Section 1: Chemical Product and Company Identification

Product Name: Sodium fluoride

Catalog Codes: SLS2260, SLS3682

CAS#: 7681-49-4

RTECS: WB0350010

TSCA: TSCA 8(b) inventory: Sodium fluoride

CI#: Not available.

Synonym: Sodium Fluoride Powder, Reagent ACS; Sodium Fluoride Powder, USP, EP, BP; Sodium Hydrofluoride; Sodium Monofluoride

Chemical Name: Sodium Fluoride

Chemical Formula: NaF

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Sodium fluoride	7681-49-4	100

Toxicological Data on Ingredients: Sodium fluoride: ORAL (LD50): Acute: 52 mg/kg [Rat]. 57 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant, corrosive), of ingestion, of inhalation. Slightly hazardous in case of skin contact (corrosive). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, lungs, the nervous system, heart, gastrointestinal tract, cardiovascular system, bones, teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Containers may explode when heated

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 2.5 (mg/m3) from NIOSH Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystals solid. crystalline powder.)

Odor: Odorless.

Taste: Salty

Molecular Weight: 41.99 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: 1704°C (3099.2°F)

Melting Point: 993°C (1819.4°F)

Critical Temperature: Not available.

Specific Gravity: 2.78 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility:
Soluble in cold water, hot water. Solubility in water: 5g/100 ml @ 100 deg. C, 4.3 g/100 @ 25 deg C, 4.0 g/100 ml @ 15 deg. C. Very slighly soluble in alcohol.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, dust generation, excess heat

Incompatibility with various substances: Reactive with oxidizing agents, metals, acids, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity:
Contact with metals may evolve flammable hydrogen gas. Sodium reacts with acids to form hydrogen fluoride. Alkali fluorides (except lithium salt) absorb Sodium Fluoride to form acid fluorides.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 52 mg/kg [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: kidneys, lungs, the nervous system, heart, gastrointestinal tract, cardiovascular system, bones, teeth.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of eye contact (corrosive), of ingestion, of inhalation. Slightly hazardous in case of skin contact (corrosive).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose: LDL [Human] - Route: Oral; Dose: 71 mg/kg LDL [Woman] - Route: Oral; Dose: 90 mg/kg LDL [Woman] - Route: Oral; Dose: 360 mg/kg LDL [Mouse] - Route: Skinl; Dose: 300 mg/kg

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects (fertililty, fetoxicity), and birth defects based on animal data. May cause cancer based on animal data. May cause genetic (mutagenic) and tumorigenic effects.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation and possible burns, especially if skin is wet or moist. Eyes: Causes eye irritation and burns. May cause chemical conjunctivitis and corneal damage. Ingestion: Harmful if swallowed. Causes digestive (gastrointestinal) tract irritation and burns. May cause severe and permanent damage to the digestive. Ingestion of large amounts may cause salivation, thirst, nausea, vomiting, hypermotility, diarrhea, and abdominal pain. May affect behavior/ central nervous system/nervous system (headache, nervousness, dizziness, seizures, convulsions, tremor, muscle weakness, somnolence), respiration (respiratory depression, dyspnea), cardiovascular system (weak pulse, hypotension, dysrhythmias, cardiac arrest), liver, urinary system (polyuria, polydypsia) brain, metabolism (loss of appetite, hypcalcemia, hyperkalemia, hypomagnesia,), teeth, bones, and blood (changes in red and white blood cell count, interference in blood coagulation) Inhalation: Causes irritation and chemical burns of the respiratory tract with coughing, breathing difficulty and possibly nasal septum perforation and coma. May affect bones. Chronic Potential Heath Effects: Chronic ingestion may cause fluorosis. Effects of fluorisis may include joint pain, weakness, limited joint mobility, brittle bones, ossifications on x-ray, thickening of long bone cortices, calcificaiton of ligaments, osteomalacia, osteosclerosis (skeletal (bone and teeth) abnormalties) and mottled tooth enamel. Other symptoms may include anemia, nausea, vomiting, diarrhea or constipation, kidney damage and weight loss/anorexia. Chronic inhalation may cause bronchitis to develop with cough, phlegm, and/or shortness of breath. , liver (hepatic enzymes increased, jaundice), .

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Sodium fluoride UNNA: 1690 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found. California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. Connecticut hazardous material survey.: Sodium fluoride Illinois chemical safety act: Sodium fluoride New York release reporting list: Sodium fluoride Rhode Island RTK hazardous substances: Sodium fluoride Pennsylvania RTK: Sodium fluoride Massachusetts RTK: Sodium fluoride Massachusetts spill list: Sodium fluoride New Jersey: Sodium fluoride New Jersey spill list: Sodium fluoride Louisiana spill reporting: Sodium fluoride California Director's List of Hazardous Substances: Sodium fluoride TSCA 8(b) inventory: Sodium fluoride TSCA 8(a) PAIR: Sodium fluoride CERCLA: Hazardous substances.: Sodium fluoride: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R25- Toxic if swallowed. R32- Contact with acids liberates very toxic gas. R36/38- Irritating to eyes and skin. S22- Do not breathe dust. S36- Wear suitable protective clothing. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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