

SAFETY DATA SHEET

1. Identification

Product identifier: SODIUM FLUORIDE

Other means of identification

Product No.: 7636, 3688, 3689, 5325

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard classification

Health hazards

Acute toxicity (Oral)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Environmental hazards

Acute hazards to the aquatic environment	Category 3
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Label elements

Hazard symbol:



Signal word: Danger

Hazard statement: Fatal if swallowed.
Causes skin irritation.
Causes serious eye irritation.
Harmful to aquatic life.

Precautionary statement

- Prevention:** Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
- Response:** IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Specific treatment (see this label). Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect spillage.
- Storage:** Store locked up.
- Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Substances

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
SODIUM FLUORIDE		7681-49-4	98 - 100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

- General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion:** Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Inhalation:** Move to fresh air. Get medical attention if symptoms occur.
- Skin contact:** Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Symptoms: Fatal if swallowed. May cause irritation to skin, eyes, and respiratory tract.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General fire hazards: In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unauthorized personnel away. Keep upwind. Avoid inhalation of dust. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Sweep up and place in a clearly labeled container for chemical waste. Avoid dust formation. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Environmental precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling: Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities: Keep in a cool, well-ventilated place. Store in a dry place.

8. Exposure controls/personal protection

Control parameters

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)
SODIUM FLUORIDE - Dust.	TWA	2.5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	2.5 mg/m ³	US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)

Biological limit values

Chemical identity	Exposure Limit values	Source
SODIUM FLUORIDE (fluorides: Sampling time: Prior to shift.)	2 mg/l (Urine)	ACGIH BEL (02 2012)
SODIUM FLUORIDE (fluorides: Sampling time: End of shift.)	3 mg/l (Urine)	ACGIH BEL (02 2012)

Appropriate engineering controls No data available.

Individual protection measures, such as personal protective equipment

General information: 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.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory protection: In case of inadequate ventilation use suitable respirator.

Hygiene measures: Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance

Physical state: Solid
Form: Powder or crystals
Color: White or colorless
Odor: Odorless
Odor threshold: No data available.
pH: 7.4

Melting point/freezing point:	993 °C
Initial boiling point and boiling range:	1,704 °C
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	Noncombustible Solid
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	0.10 kPa (25 °C)
Vapor density:	No data available.
Relative density:	2.78 (20 °C)
Solubility(ies)	
Solubility in water:	40 g/l
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Other information	
Molecular weight:	42 g/mol (FNa)

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Contact with acid liberates poisonous gas.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Avoid dust formation. Excessive heat.
Incompatible materials:	Strong oxidizers
Hazardous decomposition products:	Sodium oxides Hydrogen fluoride.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Fatal if swallowed.
Inhalation:	May cause irritation to the respiratory system.
Skin contact:	Causes skin irritation.
Eye contact:	Causes serious eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product:	LD 50 (Rat): 32.0 mg/kg
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Dermal	
Product:	No data available.
Inhalation	
Product:	No data available.
Repeated dose toxicity	
Product:	No data available.
Skin corrosion/irritation	
Product:	Causes skin irritation.
Serious eye damage/eye irritation	
Product:	Causes serious eye irritation.
Respiratory or skin sensitization	
Product:	Not a skin sensitizer.
Carcinogenicity	
Product:	This substance has no evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:	
No carcinogenic components identified	
US. National Toxicology Program (NTP) Report on Carcinogens:	
No carcinogenic components identified	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):	
No carcinogenic components identified	
Germ cell mutagenicity	
In vitro	
Product:	No mutagenic components identified
In vivo	
Product:	No mutagenic components identified
Reproductive toxicity	
Product:	No components toxic to reproduction
Specific target organ toxicity - single exposure	
Product:	No data available.
Specific target organ toxicity - repeated exposure	
Product:	No data available.
Aspiration hazard	
Product:	Not classified
Other effects:	None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

SODIUM FLUORIDE LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 124 - 194 mg/l

Mortality
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 38 - 68 mg/l Mortality

Aquatic invertebrates

Product: No data available.

Specified substance(s):

SODIUM FLUORIDE EC 50 (Water flea (Daphnia magna), 48 h): 98 mg/l Intoxication
LC 50 (Water flea (Daphnia magna), 48 h): 109 - 354 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF)

Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil:

The product is partly soluble in water. May spread in the aquatic environment.

Other adverse effects:

Harmful to aquatic organisms.

13. Disposal considerations

Disposal instructions:

Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number:	UN 1690
UN proper shipping name:	Sodium fluoride, solid
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
Packing group:	III
Marine Pollutant:	No

IMDG

UN number:	UN 1690
UN proper shipping name:	SODIUM FLUORIDE, SOLID
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
EmS No.:	F-A, S-A
Packing group:	III
Marine Pollutant:	No

IATA

UN number:	UN 1690
Proper Shipping Name:	Sodium fluoride, solid
Transport hazard class(es):	
Class(es):	6.1
Label(s):	6.1
Marine Pollutant:	No
Packing group:	III

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

SODIUM FLUORIDE Reportable quantity: 1000 lbs.

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely hazardous substance

None present or none present in regulated quantities.

SARA 304 Emergency release notification

Chemical identity	RQ
SODIUM FLUORIDE	1000 lbs.

SARA 311/312 Hazardous chemical

Chemical identity	Threshold Planning Quantity
SODIUM FLUORIDE	500 lbs

SARA 313 (TRI reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

SODIUM FLUORIDE Reportable quantity: 1000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US state regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

SODIUM FLUORIDE Listed

US. Massachusetts RTK - Substance List

SODIUM FLUORIDE Listed

US. Pennsylvania RTK - Hazardous Substances

SODIUM FLUORIDE Listed

US. Rhode Island RTK

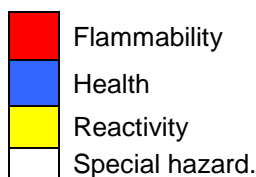
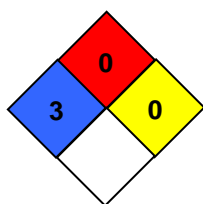
SODIUM FLUORIDE Listed

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue date:

05-10-2014

SDS_US - SDS000000950

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Revision date: No data available.

Version #: 1.0

Further information: No data available.

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