

Safety Data Sheet

Revision Date: 9/1/2017

Section 1: Chemical Identification

1.1 Chemical Identification

Product Name: Sodium fluoride

Alternative Name:

Catalog Number: GB-450

1.2 Relevant Uses and Uses Advised Against

Recommended use: This product is not for use in humans. It is for research purposes only.

1.3 Supplier Contact Information

Distributed by: Gold Biotechnology, Inc.
1328 Ashby Rd.

St. Louis, MO 63132

Phone: (314) 890-8778

Fax: (314) 890-0503

Email: contactgoldbio86@goldbio.com

1.4 Emergency Contact Information

Emergency Phone: (800)248-7609 (Monday-Friday, 9:00 a.m. – 5:00 p.m. CST)

Section 2: Hazardous Information

2.1 GHS Classification

Acute Toxicity, Oral (Category 3)

Skin Irritation (Category 2)

Eye Irritation (Category 2A)

Skin Irritation (Category 2)

Eye Irritation (Category 2B)

Specific Target Organ Toxicity, Single Exposure (Category 3)

2.2 GHS Label Elements, Including Precautionary statements



DANGER!

2.3 Hazard Statements

H301: Toxic if swallowed

H315: Causes skin irritation

H319: Causes serious eye irritation

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- H315: Causes skin irritation
H320: Causes eye irritation
H335: May cause respiratory irritation

2.4 Precautionary Statements

- P264: Wash skin thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+310+330: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician; Rinse mouth
P302+352: IF ON SKIN: Wash with soap and water
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P332+313: If skin irritation occurs: Get medical advice/attention
P337+313: If eye irritation persists get medical advice/attention
P362: Take off contaminated clothing and wash before reuse
P405: Store locked up
P501: Dispose of contents/container to an approved waste disposal plant
P261: Avoid breathing dust/fume/gas/mist/vapours/spray
P264: Wash skin thoroughly after handling
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection
P302+352: IF ON SKIN: Wash with soap and water
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+313: IF exposed or concerned: Get medical advice/attention
P332+313: If skin irritation occurs: Get medical advice/attention
P321: Specific treatment (see First Aid Measures on this label)
P337+313: If eye irritation persists get medical advice/attention
P362: Take off contaminated clothing and wash before reuse
P403+233: Store in a well ventilated place. Keep container tightly closed
P405: Store locked up
P501: Dispose of contents/container to an approved waste disposal plant

Section 3: Composition/Information on Ingredients

3.1 Composition

Identity:	Sodium fluoride
IUPAC:	sodium;fluoride
Synonyms:	
CAS Number:	7681-49-4 [1.5%]
Molecular Formula:	NaF
Molecular Weight:	41.988 g/mol

Section 4: First Aid Measures

4.1 Detailed First Aid Measures

Inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin:	Immediately wash skin copiously with soap and water. Take victim immediately to hospital. Consult a physician.
Eye:	Immediately rinse out with water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Consult a physician.
Ingestion:	Wash out mouth with water. Drink plenty of water. Consult a physician. Never give anything by mouth to an unconscious person.
Notes to Physician:	Treat symptomatically and supportively.

4.2 Most Important Symptoms And Effects, Either Acute Or Delayed

The most important known symptoms and effects are described in the labeling (see section2). And /or in section 11.

4.3 Indication of immediate medical attention and special treatment needed

Not available

Section 5: Fire Fighting Measures

5.1 Conditions of flammability:

Not flammable or combustible.

5.2 Suitable extinguishing media:

Alcohol-resistant foam, dry chemical or carbon dioxide. DO NOT use water jet.

5.3 Specific hazards arising from the chemical

During a fire, highly toxic gases may be generated by thermal decomposition or combustion – Hydrogen fluoride, Sodium oxides.

5.4 Specific protective actions for fire-fighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

6.2 Environmental precautions:

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up:

Soak up with absorbent material, discard.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Always wear personal protective equipment (PPE, see section 8).

7.2 Conditions for safe storage, including and incompatibilities:

Keep container tightly closed.

Store at 4°C.

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters:

Contains no substances with occupational exposure limit values.

8.2: Appropriate engineering controls:

Contains no substances with occupational exposure limit values.

8.3 Personal Protective Equipment (PPE):

Eye/Face Protection: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique - without touching outer surface of glove - to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protective Clothing or Equipment: Wear appropriate protective clothing to prevent exposure.

Control Parameters - Workplace

<u>Component:</u>	<u>CAS-No:</u>	<u>Value:</u>
sodium fluoride	7681-49-4	TWA TWA

Control

<u>Parameters:</u>	<u>Basis:</u>
2.5 mg/m3	USA. NIOSH Recommended Exposure Limits

sodium fluoride	7681-49-4	TWA	2.5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
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sodium fluoride	7681-49-4	TWA	2.5 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
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Remarks: Not classifiable as a human carcinogen

sodium fluoride	7681-49-4	PEL	2.5 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
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Control Parameters - Biological

<u>Component:</u>	<u>CAS-No:</u>	<u>Value:</u>	<u>Control Parameters:</u>	<u>Basis:</u>
sodium fluoride	7681-49-4	Fluoride	2 mg/L	Urine

Remarks: Prior to shift (16 hours after exposure ceases)

sodium fluoride	7681-49-4	Fluoride	3 mg/L	Urine
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End of shift (As soon as possible after exposure ceases)

Section 9: Physical and Chemical Properties

9.1 General chemical and physical properties

Appearance:	Solid
Odor:	Not Available
Odor Threshold:	Not Available
pH:	Not Available
Melting Point:	993°C
Freezing Point:	Not Available
Boiling Point/Range:	Not Available
Flash Point:	Not Available
Evaporation Rate:	Not Available
Lower Explosion Limit:	Not Available
Upper Explosion Limit:	Not Available
Vapor Pressure:	1.9 hPa
Vapor Density:	Not Available
Relative Density:	Not Available

Solubility:	Not Available
Partition Coefficient n-octanol/water:	Not Available
Auto-Ignition Temperature:	Not Available
Decomposition Temperature:	Not Available
Viscosity:	Not Available

Section 10: Stability and Reactivity Data

10.1 Reactivity:

Not available

10.2 Chemical Stability:

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions:

Contact with acids liberates very toxic gas

10.4 Conditions to avoid:

Incompatible materials. Exposure to moisture. Reacts dangerously with glass

10.5 Incompatible materials:

Strong oxidizing agents. Glass

10.6 Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Hydrogen fluoride, Sodium oxides.

Section 11: Toxicological Information

11.1 Toxicological effects

Acute toxicity:

Sodium fluoride Oral: LD₅₀ (Rat Male and Female) - 148.5 mg/kg (US-EPA) Remarks: (ECHA)

Skin corrosion/irritation:

Irritating to skin.

Eyes (Rabbit) - Result: Eye irritation - 24 h Remarks: Moderate eye irritation

Respiratory or skin sensitization:

Buehler Test - (Guinea pig) - Result: negative Remarks: (ECHA)

Germ cell mutagenicity:

Test Type: Mutagenicity (mammal cell test):

Metabolic activation: without metabolic activation

Result: negative Remarks: (ECHA)

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative Remarks: (ECHA)

Test Type: Genotoxicity in vivo Species: Mouse
Application Route: Oral Result: negative

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity:

Not available.

STOT-single exposure:

Not available.

STOT-repeated exposure:

Not available.

Aspiration hazard:

Not available.

Likely routes of exposure:

Respiratory organs, mouth, skin, and eyes.

Symptoms of exposure:

Liver - Irregularities - Based on Human Evidence
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information:

RTECS: WB0350000
Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.
Prolonged or repeated exposure can cause:; Damage to the lungs. Other dangerous properties can not be excluded

Section 12: Ecological Information

12.1 Toxicity:

Toxicity to fish: mortality NOEC - *Cyprinodon variegatus* (sheepshead minnow) - 500 mg/L - 96 h

LC₅₀ - *Gambusia affinis* (Mosquito fish) - 925 mg/L - 96 h Remarks: (IUCLID)

LC₅₀ - *Oncorhynchus mykiss* (rainbow trout) - 200 mg/L - 96 h

Toxicity to daphnia and other aquatic invertebrates: EC₅₀ - *Daphnia magna* (Water flea) - 338 mg/L - 48 h Remarks: (IUCLID)

Toxicity to algae: IC₅₀ - *Desmodesmus subspicatus* (green algae) - 850 mg/L - 72 h Remarks: (IUCLID)

Toxicity to bacteria: EC₅₀ - *Pseudomonas putida* - 231 mg/L - 16 h Remarks: (referred to the

12.2 Persistence and degradability:

Not available.

12.3 Bioaccumulative potential:

Bioaccumulation: *Salmo trutta* - 10 d- 5 mg/L (sodium fluoride)

Bioconcentration factor (BCF): 2.3

12.4 Mobility in soil:

Not available.

12.5 Other adverse effects:

None.

Section 13 Disposal Considerations

Dispose of product in accordance with local rules and regulations.

Section 14: Transport Information

14.1 US Department of Transportation (DOT)

UN Number: 1690
Proper shipping name: Sodium fluoride, Solid
Class: 6.1
Packing Group: III
Marine Pollutant: no

14.2 International Maritime Dangerous Goods (IMDG):

UN Number: 1690
Proper shipping name: Sodium fluoride, Solid
Class: 6.1
Packing Group: III
Marine Pollutant: no

14.2 International Air Transportation Association (IATA)

Gold Biotechnology
St. Louis, MO
Ph: (314)890-8778
Web: www.goldbio.com
Email: contactgoldbio86@goldbio.com

UN Number: 1690
Proper shipping name: Sodium fluoride, Solid
Class: 6.1
Packing Group: III
Marine Pollutant: no

Further Information

EMS-No: F-A, S-A

Reportable Quantity (RQ): 1000 lbs

Section 15: Regulatory Information

SARA 302 Components:

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards:

No SARA Hazards.

Massachusetts Right To Know Components:

Sodium fluoride;sodium orthovanadate;
sodium pyrophosphate; β -glycerophosphate;
sodium molybdate

CAS - No.

7681-49-4 [1.5%]

Pennsylvania Right To Know Components:

Sodium fluoride;sodium orthovanadate;
sodium pyrophosphate; β -glycerophosphate;
sodium molybdate

CAS - No.

7681-49-4 [1.5%]

New Jersey Right To Know Components:

Sodium fluoride;sodium orthovanadate;
sodium pyrophosphate; β -glycerophosphate;
sodium molybdate

CAS - No.

7681-49-4 [1.5%]

California Prop. 65 Components:

This product does not contain any chemical known to the State of California to cause cancer, birth, or any other reproductive defects.

Section 16: Other Information

While Gold Biotechnology, Inc. believes the information contained herein to be true and accurate, it has relied on information provided by others. Gold Biotechnology, INC. makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or with respect to the results to be obtained from the use of the product. Gold Biotechnology, Inc. disclaims all liability with respect to the use of this product, including

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Preparation Information

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