

SAFETY DATA SHEET

Preparation Date: 9/3/2015

Revision Date: 3/18/2020

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: C7205
Product Name: SODIUM BIFLUORIDE, TECHNICAL

Other means of identification

Synonyms: Sodium hydrogen fluoride
Sodium hydrogen difluoride
Sodium acid fluoride
Fluorure acide de sodium [French]
Fluoruro acido de sodio [Spanish]
CAS #: 1333-83-1
RTECS # WB0350010
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Tin plate production; neutralizer in laundry rinsing operations; preservative for Zoological and anatomical specimens; etching glass; antiseptic; leather bleach; cleaner for stone and brick building faces.
Uses advised against No information available

Supplier: Lab Alley LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
512-668-9918

Order Online At: <https://www.laballey.com/products/sodium-bifluoride>

Emergency telephone number InfoTrac: 800-535-5053

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 3
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Label elements

Product code: C7205

Product name: SODIUM BIFLUORIDE

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Danger

Hazard statements

Toxic if swallowed
Causes severe skin burns and eye damage
May cause respiratory irritation



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Reacts with water to evolve heat and toxic gases

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

Specific treatment (see .? on this label)

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Sodium Bifluoride 1333-83-1	1333-83-1	100
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4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

Eye Contact:

Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation:

Move to fresh air. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, give oxygen. Immediate medical attention is required.

Ingestion:

Toxic if swallowed. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes severe skin burns and eye damage. Irritating to respiratory system. Irritating to mouth, throat and stomach. May cause pulmonary edema. May cause perforation of the digestive tract. May cause inflammation and edema of the larynx and bronchi. May cause coughing and shortness of breath. Ingestion of very large amounts can cause Fluoride poisoning with weakness, convulsions, collapse and death. May cause abdominal pain, nausea, vomiting, diarrhea. May cause loss of appetite. Convulsions. Coma. Tetany. May cause hypocalcemia. Cardiac arrest. Cardiac arrhythmias. It may affect the bones and teeth.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products:

If the product is involved in a fire the following can be released: Hydrogen fluoride, Sodium fluoride

Specific hazards:

Highly toxic hydrogen fluoride gas is produced during combustion

Special Protective Actions for Firefighters**Specific Methods:**

Do not use water on material itself. Do not get water inside containers.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up**Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Sweep up and shovel. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE**Precautions for safe handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Do not allow contact with water. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas. Do not breathe vapours/dust. Do not ingest. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

Water. Strong acids. Metals. Combustible materials. Organic materials. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****National occupational exposure limits**

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Sodium Bifluoride 1333-83-1	2.5 mg/m ³ TWA (as F) 2.5 mg/m ³ TWA (dust)	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Sodium Bifluoride 1333-83-1	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWAEV (as F)

Australia and Mexico

Components	Australia	Mexico
Sodium Bifluoride 1333-83-1	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. 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.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles
Skin and body protection:	Long sleeved clothing. Chemical resistant apron. Gloves. Boots.
Respiratory protection:	Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent..
Hygiene measures:	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state: Solid	Appearance: Crystalline powder.	Color: White.
Odor: Pungent.	Taste Saline.	Formula: NaHF ₂
Molecular/Formula weight: 62.00 g/mol	Flammability: No information available	Flash point (°C): No data available
Flashpoint (°C/°F): No information available.	Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available
Lower Explosion Limit (%): No information available	Upper Explosion Limit (%): No information available	pH: No information available
Melting point/range(°C/°F): >160°C/>320°F	Boiling point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Density (g/cm³): 2.08	Specific gravity: No information available
Vapor pressure @ 20°C (kPa): No information available	Evaporation rate: No information available	Vapor density: No information available
VOC content (g/L): No information available	Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available
Viscosity: No information available	Miscibility: No information available	Solubility: Reacts with water Soluble in Water

10. STABILITY AND REACTIVITY

Reactivity

Reacts with strong acids to form hydrogen fluoride.
It will attack natural rubber, leather and many organic materials.
It will attack (etch) glass
Reacts with water liberating heat and forming a corrosive solution. The reaction is not violent
Evolves flammable hydrogen gas on contact with metals

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: May release toxic and/or corrosive fumes

Conditions to avoid: Exposure to moist air. Exposure to moisture. Heat. Incompatible materials.

Incompatible Materials: Water. Strong acids. Metals. Combustible materials. Organic materials. Oxidizing agents.

Hazardous decomposition products: When heated to decomposition it emits highly corrosive fumes.. Hydrogen fluoride. Sodium Fluoride.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Inhalation. Skin. Eyes.

Acute Toxicity

Component Information

Sodium Bifluoride - 1333-83-1

LD50/oral/rat = No information available

LD50/oral/mouse = No information available

LD50/dermal/rat = No information available

LD50/dermal/rabbit = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =

Value - Acute Tox Oral = No information available

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:

Causes skin burns. Causes severe irritation and burns.

Eye Contact:

Causes eye burns. Causes serious eye damage.

Inhalation

Causes respiratory tract (nose, throat, lungs), and mucous membrane irritation. Symptoms may include coughing and shortness of breath. It may cause pulmonary edema.

Ingestion Toxic if swallowed. Causes burns of the mouth, throat, and danger of perforation of the esophagus and stomach. Nausea, vomiting, abdominal pain, diarrhea, loss of appetite, cough, shortness of breath. May cause throat edema and suffocation, convulsions, loss of consciousness, coma, cardiopulmonary arrest. Hypocalcemia with nerve disorders (tetany), and cardiac rhythm disorders. May affect bones and cardiovascular system (cardiac arrest, cardiac rhythm disorders).

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Chronic exposure may affect the liver and kidneys
Chronic fluoride poisoning can cause anorexia, weight loss, bone changes (brittle bones) or deformations and dental defects (mottling of teeth). It may also affect blood and cause anemia
Chronic inhalation and ingestion may cause fluorosis with skeletal abnormalities. Fluorosis is characterized by nausea, vomiting, loss of appetite, diarrhea, constipation, anemia, weakness, brittle bones, stiffness of joints. Can also result in osteosclerosis (an increase of bone density in characteristic patterns. Can also cause discoloration of teeth, and may cause kidney damage.

Sensitization: No information available

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Sodium Bifluoride	Group 3 - Not classifiable as to its carcinogenicity to humans (listed under fluorides, inorganic)	A4 - Not Classifiable as a Human Carcinogen (listed under fluorides)	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)
IARC (International Agency for Research on Cancer)*

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure Respiratory system.
STOT - repeated exposure No information available
Target Organs: Bones. Kidneys. Liver.

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Sodium Bifluoride	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2439
Proper Shipping Name: Sodium hydrogendifluoride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
ERG No: 154
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): R3

TDG (Canada)

UN-No: UN2439
Proper Shipping Name: Sodium hydrogendifluoride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: No information available

ADR

UN-No: UN2439
Proper Shipping Name: Sodium hydrogendifluoride
Hazard Class: 8
Packing Group: II
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available

14. TRANSPORT INFORMATION

CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN2439
Proper Shipping Name: Sodium hydrogendifluoride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN2439
Proper Shipping Name: Sodium hydrogendifluoride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2439
Proper Shipping Name: Sodium hydrogendifluoride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: No information available

IATA

UN-No: UN2439
Proper Shipping Name: Sodium hydrogendifluoride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
ERG Code: 8L
Special Provisions: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Sodium Bifluoride	Present	Present KE-31448	Present	Present (1)-332	Present	Present	Present 215-608-3

U.S. Regulations

Sodium Bifluoride

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 1703
0936

Sodium Bifluoride

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Environmental hazard

Pennsylvania RTK - Environmental Hazard List Present

Minnesota - Hazardous Substance List: Present (F, as dust) (listed under fluorides, inorganic)

New York Release Reporting - List of Hazardous Substances:

5000 lb RQ

100 lb RQ

Louisiana Reportable Quantity List for Pollutants: 100lbfinal RQ

45.4kgfinal RQ

California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sodium Bifluoride	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Sodium Bifluoride	100 lb final RQ 45.4 kg final RQ	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sodium Bifluoride	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

E Corrosive material

Sodium Bifluoride

E

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Sodium Bifluoride	1%

Inventory

Components	Canada (DSL)	Canada (NDSL)
Sodium Bifluoride	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Sodium Bifluoride	Present	Not listed

EU Classification

R-phrase(s)

R25 - Toxic if swallowed.

R34 - Causes burns.

S -phrase(s)

S22 - Do not breathe dust.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 - Wear suitable gloves.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 1/2 - Keep locked up and out of the reach of children.

Components	Classification	Concentration Limits:	Safety Phrases
Sodium Bifluoride	T; R25 C; R34	No information	S1/2 S22 S26 S37 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive.

T - Toxic



16. OTHER INFORMATION

16. OTHER INFORMATION

Preparation Date: 9/3/2015
Revision Date: 3/18/2020
Prepared by: Lab Alley

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Lab Alley LLC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Lab Alley assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet