



LTS Research Laboratories, Inc.
Safety Data Sheet
Bismuth Fluoride

1. Product and Company Identification

Trade Name: Bismuth fluoride
Chemical Formula: BiF₃
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H314: Causes severe skin burns and eye damage

Precautionary Statements: P260: Do not breathe dust/fume/gas/mist/vapours/spray
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health: 3
Flammability: 0
Physical: 2

3. Composition

Chemical Family: Ceramic
Additional Names: Bismuth trifluoride, Bismuth (III) fluoride

Bismuth fluoride (BiF₃):
Percentage: 100 wt%
CAS #: 7787-61-3
EC #: 232-124-8

4. First Aid Procedures

| | |
|---------------------|--|
| General Treatment: | Seek medical attention if symptoms persist. |
| Special Treatment: | None |
| Important Symptoms: | None |
| Inhalation: | Remove victim to fresh air. Supply oxygen if breathing is difficult. |
| Ingestion: | Seek medical attention. |
| Skin: | Wash affected area with mild soap and water. Remove any contaminated clothing. Rub in calcium gluconate solution or calcium gluconate gel immediately. |
| Eyes: | Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing |

5. Firefighting Measures

| | |
|--------------------------------|---|
| Flammability: | Non-flammable |
| Extinguishing Media: | No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. |
| Spec. Fire Fighting Procedure: | Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products. |

6. Accidental Release Measures

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|----------------------------------|--|
| If Material Is Released/Spilled: | Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. |
| Environmental Precautions: | Isolate runoff to prevent environmental pollution. |

7. Handling and Storage

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|----------------------------|--|
| Handling Conditions: | Wash thoroughly after handling. |
| Storage Conditions: | Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10. |
| Work/Hygienic Maintenance: | Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. |
| Ventilation: | Provide sufficient ventilation to maintain concentration at or below threshold limit. |

8. Exposure Controls and Personal Protection

| | |
|------------------------------|---|
| Permissible Exposure Limits: | 2.5 mg/m ³ as F, long-term value |
| Threshold Limit Value: | 2.5 mg/m ³ as F, long-term value |
| Special Equipment: | None |
| Respiratory Protection: | Dust Respirator |
| Protective Gloves: | Rubber gloves |
| Eye Protection: | Safety glasses or goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

9. Physical and Chemical Characteristics

| | |
|---------------------------|---------------|
| Color | White |
| Form: | Powder |
| Odor: | Odorless |
| Water Solubility: | Insoluble |
| Boiling Point: | N/A |
| Melting Point: | 727 °C |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 5.32 g/cc |
| Molecular weight: | 265.975 g/mol |

10. Reactivity

| | |
|-----------------------------------|---|
| Stability: | Stable under recommended storage conditions |
| Reacts With: | Oxidizing agents |
| Incompatible Conditions: | None |
| Hazardous Decomposition Products: | Hydrogen fluoride |

11. Toxicological Information

Potential Health Effects:

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|-------------|--|
| Eyes: | Causes serious irritation |
| Skin: | Causes irritation |
| Ingestion: | May cause irritation |
| Inhalation: | May cause irritation |
| Chronic: | Bismuth and bismuth compounds are often poorly absorbed. Should absorption occur, however, exposure may cause loss of appetite, headache, skin rash, exodermatitis, kidney injury and jaundice. Repeated or prolonged exposure may cause a bismuth line or black spots on the gums, foul breath and salivation. Fluorides may cause salivation, nausea, vomiting, diarrhea and abdominal pain, followed by weakness, tremors, shallow respiration, convulsions and coma. May cause brain and kidney damage. Chronic fluoride poisoning can cause severe bone changes, loss of weight, anorexia, anemia and dental defects. |

| | |
|--------------------------------|-----|
| Signs & Symptoms: | N/A |
| Aggravated Medical Conditions: | N/A |

Median Lethal Dose: N/A

Carcinogen: N/A

12. Ecological Information

| | |
|--|-----|
| Aquatic Toxicity: | Low |
| Persistent Bioaccumulation Toxicity: | No |
| Very Persistent, Very Bioaccumulative: | No |
| Notes: | N/A |

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous:

Hazardous



Hazard Class:

8 Corrosive substances.

Packing Group:

III

UN Number:

UN3260

Proper Shipping Name:

Corrosive solid, acidic, inorganic, n.o.s. (Bismuth fluoride)

Segregation groups:

Acids

15. Regulatory Information

Sec 302 Extremely Hazardous:

No

Sec 304 Reportable Quantities:

N/A

Sec 313 Toxic Chemicals:

No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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