Material Safety Data Sheet
Beryllium fluoride

MSDS# 92567

Section 1 - Chemical Product and Company Identification

MSDS Name: Beryllium fluoride
Catalog Numbers: AC197010000, AC197010100, AC197010250, AC366570000, AC366570100
Synonyms: Beryllium difluoride.

Company Identification: Fisher Scientific
                         One Reagent Lane
                         Fair Lawn, NJ 07410
For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>7787-49-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>Beryllium fluoride</td>
</tr>
<tr>
<td>%</td>
<td>&gt;97</td>
</tr>
<tr>
<td>EINECS#</td>
<td>232-118-5</td>
</tr>
</tbody>
</table>

Hazard Symbols: T+ N
Risk Phrases: 49 25 26 36/37/38 43 48/23 51/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! May cause allergic skin reaction. Dangerous for the environment. Hygroscopic (absorbs moisture from the air). Harmful if inhaled or swallowed. Causes eye, skin, and respiratory tract irritation. May cause cancer by inhalation. Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.
Skin: Causes skin irritation. May cause sensitization by skin contact.
Ingestion: May cause irritation of the digestive tract. Toxic if swallowed.
Inhalation: May be fatal if inhaled. Causes respiratory tract irritation.

Chronic: Chronic beryllium disease, an immunologically mediated response occurring after a latent period ranging from a few weeks to many years, causes difficult breathing on exertion, weight loss, nonproductive cough, fatigue, chest pain, anorexia, and weakness.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing,
Inhalation: give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Section 5 - Fire Fighting Measures

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

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

- Autoignition Temperature: Not available
- Flash Point: Not available
- Explosion Limits: Not available

NFPA Rating: health: 4; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Sweep up, then place into a suitable container for disposal.

Section 7 - Handling and Storage

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not breathe dust. Use only with adequate ventilation or respiratory protection.

Storage: Poison room locked.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beryllium fluoride</td>
<td>0.002 mg/m3 TWA</td>
<td>2.5 mg/m3 TWA</td>
<td>2.5 mg/m3 TWA</td>
</tr>
<tr>
<td>(as Be) (listed under Beryllium compounds, n.o.s.) .01</td>
<td>(inorganic)</td>
<td>(listed under Fluorides).2</td>
<td></td>
</tr>
<tr>
<td>mg/m3 STEL (as Be) (listed under Beryllium compounds, n.o.s.)</td>
<td>(listed under Fluorides, Beryllium)</td>
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<td></td>
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<tr>
<td>mg/m3 IDLH (as Be) (listed under Beryllium compounds, n.o.s.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mg/m3 Ceiling</td>
<td>2.5 mg/m3 TWA</td>
<td>2.5 mg/m3 TWA</td>
<td>2.5 mg/m3 TWA</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Beryllium fluoride: 2 ñg/m3 TWA (as Be) (listed under Beryllium compounds, n.o.s.) 2.5 mg/m3 TWA (listed under Fluorides)

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a
Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Chunks
Color: colorless to grayish
Odor: Not available
pH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available

Freezing/Melting Point: 545 deg C (1,013.00°F)

Decomposition Temperature: Not available
Solubility in water: Soluble

Specific Gravity/Density:

Chemical Stability: Stable.
Conditions to Avoid: Dust generation, exposure to moist air or water, confined spaces.

Incompatibilities with Other Materials: Not available

Hazardous Decomposition Products: Hydrogen fluoride gas.

Hazardous Polymerization: Has not been reported.

Section 10 - Stability and Reactivity

RTECS#: CAS# 7787-49-7: DS2800000
RTECS: CAS# 7787-49-7:
LD50/LC50: Oral, mouse: LD50 = 100 mg/kg;
Oral, rat: LD50 = 98 mg/kg;

Carcinogenicity: Beryllium fluoride - California: carcinogen, initial date 10/1/87 (Beryllium compounds, n.o.s.). NTP: Known carcinogen (Beryllium compounds, n.o.s.). IARC: Group 1 carcinogen

Other: The toxicological properties have not been fully investigated.

Section 11 - Toxicological Information

Section 12 - Ecological Information

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: BERYLLIUM COMPOUND, N.O.S.
Hazard Class: 6.1
UN Number: UN1566
Packing Group: III
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

USA RQ: CAS# 7787-49-7: 1 lb final RQ; 0.454 kg final RQ
European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+ N

Risk Phrases:
- R 49 May cause cancer by inhalation.
- R 25 Toxic if swallowed.
- R 26 Very toxic by inhalation.
- R 36/37/38 Irritating to eyes, respiratory system and skin.
- R 43 May cause sensitization by skin contact.
- R 48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
- R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:
- S 53 Avoid exposure - obtain special instructions before use.
- S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 7787-49-7: Not available

Canada

CAS# 7787-49-7 is listed on Canada's NDSL List

Canadian WHMIS Classifications: D2A, D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7787-49-7 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 7787-49-7 is listed on the TSCA Inventory.

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