Material Safety Data Sheet
Cesium Fluoride, 99.9%

MSDS# 98844

Section 1 - Chemical Product and Company Identification

MSDS Name: Cesium Fluoride, 99.9%
Catalog Numbers: AC315910000, AC315910050, AC315910250, AC315911000
Synonyms: 

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium
Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 13400-13-0
Chemical Name: Cesium Fluoride
%: 99.9%
EINECS#: 236-487-3

Hazard Symbols: T
Risk Phrases: 23/24/25 34

Section 3 - Hazards Identification

Caution! Hygroscopic (absorbs moisture from the air). The toxicological properties of this material have not been fully investigated. May cause respiratory and digestive tract irritation and possible burns. May cause eye and skin irritation with possible burns. This substance may form hazardous decomposition products which may cause possible burns. Target Organs: None.

Potential Health Effects

Eye: May cause eye irritation and possible burns.
Skin: May cause severe skin irritation with possible burns, especially if skin is wet or moist.
Ingestion: Inorganic fluorides can be harmful. Acute exposure to fluorine compounds can lead to digestive tract burns, and abdominal pain. May cause irritation of the digestive tract and possible burns.
Inhalation: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

Chronic inhalation and ingestion may cause chronic fluoride poisoning (fluorosis) characterized by weight loss,
Chronic: weakness, anemia, brittle bones, and stiff joints. Chronic exposure to fluoride compounds may cause systemic toxicity.

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: 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.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. Substance is noncombustible.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature: Not available
Flash Point: Not available
Explosion Limits: Not available
Lower:
Explosion Limits: Not available
Upper:
NFPA Rating: Not published

Section 6 - Accidental Release Measures

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

Spills/Leaks: Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Store in a tightly closed container.

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>Cesium Fluoride</td>
<td>2.5 mg/m3 TWA (as F) (listed under Fluorides).</td>
<td>none listed</td>
<td>2.5 mg/m3 TWA (as dust) (listed under Fluorides).</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Cesium Fluoride: 2.5 mg/m3 TWA (listed under Fluorides)

Engineering Controls:
Use adequate ventilation to keep airborne concentrations low.

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 gloves 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: Powder
Color: white
Odor: Not available
pH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 1251 deg C (2,283.80°F)
Freezing/Melting Point: 682 deg C (1,259.60°F)
Decomposition Temperature: Not available
Solubility in water: Freely Soluble
Specific Gravity/Density:
Molecular Formula: CsF
Molecular Weight: 151.91

Section 10 - Stability and Reactivity

Chemical Stability: Not available
Conditions to Avoid: Moisture.
Incompatibilities with Other Materials: Acids, benzenediazonium tetrafluoroborate, difluoroamine.
Hazardous Decomposition Products: Hydrogen fluoride gas.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 13400-13-0: FK9650000
LD50/LC50: RTECS: Not available.
Carcinogenicity: Cesium Fluoride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

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

Section 14 - Transport Information

US DOT
Shipping Name: CORROSIVE SOLIDS, TOXIC, N.O.S.
Hazard Class: 8
UN Number: UN2923
Packing Group: III
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: T

Risk Phrases:
  R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
  R 34 Causes burns.

Safety Phrases:
  S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)
  CAS# 13400-13-0: Not available

Canada
  CAS# 13400-13-0 is listed on Canada's NDSL List
  Canadian WHMIS Classifications: Not available
  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# 13400-13-0 is not listed on Canada's Ingredient Disclosure List.

US Federal
  TSCA
    CAS# 13400-13-0 is listed on the TSCA Inventory.

Section 16 - Other Information
  MSDS Creation Date: 1/28/1998
  Revision #5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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