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## MATERIAL SAFETY DATA SHEET (MSDS)

### CALCIUM FLUORIDE POWDER (FLUORSPAR)

#### 1 - Chemical Product

MSDS Name: Calcium fluoride  
 Synonym: Calcium difluoride; Fluorite; Fluorspar; Acid-Spar

Cas NO: 7789-75-5

Product Coad: C0054900500

Molecular Formula: CaF<sub>2</sub>  
 Molecular Weight: 78.08

#### 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
7789-75-5	Calcium fluoride	100	232-188-7

#### 3 - HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW

Harmful by inhalation and if swallowed.

Potential Health Effects

Eye: Causes eye irritation. Skin: Causes skin irritation. Chronic inhalation may cause lung damage, bronchitis, and silicosis. May decrease blood clotting.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts of fluoride may cause salivation, nausea, vomiting, abdominal pain, fever, labored breathing. Exposure to fluoride compounds can result in systemic toxic effects on the heart, liver, and kidneys. It may also deplete calcium levels in the body leading to hypocalcemia and death. May cause bone structure abnormalities.

Inhalation: Causes respiratory tract irritation. May cause heart disturbances, possibly leading to cardiac arrest and death. May cause hyperactive reflexes and muscular spasms. May cause respiratory arrest.

Chronic: Prolonged or repeated exposure may cause permanent bone structure abnormalities. May cause kidney injury. Chronic inhalation may cause lung damage, bronchitis, and silicosis. May decrease blood clotting. Chronic exposure to fluoride compounds may cause systemic toxicity.

#### 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.

Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Administration of calcium disodium EDTA may be useful in acute poisoning with its use at the discretion of qualified medical personnel.

#### 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

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

#### 6 - ACCIDENTAL RELEASE MEASURES

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

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions.

Provide ventilation.

#### 7 - HANDLING and STORAGE

Handling: Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Minimize dust generation and accumulation.

Avoid contact with skin and eyes. Keep container tightly closed.

Avoid ingestion and inhalation. Wash clothing before reuse.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed. Store protected from moisture.

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#### **8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits CAS# 7789-75-5: United Kingdom, WEL - TWA: (listed as fluorides, inorganic): 2.5 mg/m<sup>3</sup> TWA (as F) United Kingdom, WEL - STEL: (listed as fluorides, inorganic): 6.2 mg/m<sup>3</sup> STEL (as F) United States OSHA: 2.5 mg/m<sup>3</sup> TWA (as F) (listed under Fluorides). 2.5 mg/m<sup>3</sup> TWA (as F) (listed under Fluorides).

Belgium - TWA: (listed as fluorides, inorganic): 2.5 mg/m<sup>3</sup> VLE (a France - VME: (listed as fluorides): 2.5 mg/m<sup>3</sup> VME (as F) Germany: (listed as fluorides): 2.5 mg/m<sup>3</sup> VME (as F) Malaysia: (listed as fluorides): 2.5 mg/m<sup>3</sup> TWA (as F) Netherlands: (listed as fluorides): 3.5 mg/m<sup>3</sup> STEL (as F) Russia: 2.5 mg/m<sup>3</sup> TWA Russia: 0.5 mg/m<sup>3</sup> STEL Spain: (listed as fluorides, inorganic): 2.5 mg/m<sup>3</sup> VLA-ED (except uranium hexafluoride, as F) 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 gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

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

#### **9 - PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Solid

Color: white

Odor: none reported

pH: Not available.

Vapor Pressure: Not applicable.

Viscosity: Not applicable.

Boiling Point: Not available.

Freezing/Melting Point: 2593 deg F

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: Not available.

Solubility in water: 0.0016% @18C

Specific Gravity/Density: 3.180

#### **10 - STABILITY AND REACTIVITY**

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, moisture, excess heat.

Incompatibilities with Other Materials: Reacts with hot concentrated sulfuric acid to liberate hydrogen fluoride.

Hazardous Decomposition Products: Irritating and toxic fumes and gases, fluoride fumes.

Hazardous Polymerization: Has not been reported.

#### **11 - TOXICOLOGICAL INFORMATION**

RTECS#: CAS# 7789-75-5: EW1760000 LD50/LC50:

CAS# 7789-75-5: Oral, rat: LD50 = 4250 mg/kg; Oral, rat: LD50 = 4417 mg/kg.

Carcinogenicity:

Calcium fluoride - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

#### **12 - ECOLOGICAL INFORMATION**

#### **13 - DISPOSAL CONSIDERATIONS**

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

#### **14 - TRANSPORT INFORMATION**

Not regulated.

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**MATERIAL SAFETY DATA SHEET (MSDS)****CALCIUM FLUORIDE POWDER (FLUORSPAR)****15 - REGULATORY INFORMATION**

European/International Regulations  
European Labeling in Accordance with EC Directives  
Hazard Symbols: XN  
Risk Phrases:  
R 20/22 Harmful by inhalation and if swallowed.  
Safety Phrases:  
S 24/25 Avoid contact with skin and eyes.  
WGK (Water Danger/Protection)  
CAS# 7789-75-5: 0  
Canada  
CAS# 7789-75-5 is listed on Canada's DSL List.  
CAS# 7789-75-5 is not listed on Canada's Ingredient Disclosure List.  
US FEDERAL  
TSCA  
CAS# 7789-75-5 is listed on the TSCA inventory.

**16. Other Information**

**Product Use:** Laboratory Reagent.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

## DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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