

# CALCIUM FLUORIDE

**Triveni Chemicals**  
**135 Pancharatna Char Rasta**  
**G I D C Vapi.396195 Gujarat India**  
**Tel. 91 260 2400022 / 3258683 Fax. 2400045**

## 1. Product Identification

Synonyms: Calcium difluoride; Fluorspar; Acid spar

CAS No.: 7789-75-5

Molecular Weight: 78.07

Chemical Formula: CaF<sub>2</sub>

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Calcium Fluoride	7789-75-5	95 - 100%	Yes

## 3. Hazards Identification

### Emergency Overview

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

### Potential Health Effects

**Inhalation:** May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

**Ingestion:** Toxicity low because of the relative insolubility of the compound. In large amounts may cause vomiting, abdominal pain and diarrhea.

**Skin Contact:** May cause mild irritation and redness.

**Eye Contact:** No adverse effects expected but dust may cause mechanical irritation.

**Chronic Exposure:** Chronic exposure may cause mottling of teeth and bone damage (osteosclerosis) and fluorosis. Symptoms of fluorosis include brittle bones, calcified ligaments, and joint stiffness.

## 4. First Aid Measures

**Skin Contact:** Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

## 5. Fire Fighting Measures

**Fire:** Not considered to be a fire hazard.

**Explosion:** Not considered to be an explosion hazard.

**Fire Extinguishing Media:** Use any means suitable for extinguishing surrounding fire.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. If in contact with strong acids or steam under fire conditions, calcium fluoride may yield highly irritating fumes of hydrogen fluoride.

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

## 7. Handling and Storage

Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage.

## 8. Exposure Controls/Personal Protection

### Airborne Exposure Limits:

- OSHA Permissible Exposure Limit (PEL):2.5 mg (F)/m<sup>3</sup> (TWA)

- ACGIH Threshold Limit Value (TLV):2.5 mg (F)/m<sup>3</sup> (TWA)

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

**Personal Respirators (NIOSH Approved):** If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece particulate respirator (NIOSH type N100 filters) may be worn for up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

**Skin Protection:** Wear protective gloves and clean body-covering clothing.

**Eye Protection:** Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties / Specification

**Appearance:** White, Off White, crystalline powder.

<b>Assay.</b>	90% to 95%
<b>Formula.</b>	CaF <sub>2</sub>
<b>M.W.</b>	78.02
<b>Odor:</b>	Odorless.
<b>Solubility:</b>	Practically insoluble in water.
<b>Density:</b>	3.18
<b>% Volatiles by volume @ 21C (70F):</b>	0
<b>Boiling Point:</b>	2500C (4532F)
<b>Melting Point:</b>	1403C (2557F)

### 10. Stability and Reactivity

**Stability:** Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:** Oxides of the contained metal and halogen, possibly also free, or ionic halogen.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Strong acids.

**Conditions to Avoid:** Incompatibles.

### 11. Toxicological Information

Ingredient	Known	Anticipated	IARC Category
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Calcium Fluoride (7789-75-5)	No	No	None

### 12. Ecological Information

**Environmental Fate:** No information found.

**Environmental Toxicity:** No information found.

### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

#### 14. Transport Information

Not regulated.

#### 15. Regulatory Information

Ingredient	TSCA	EC	Japan	Australia
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Calcium Fluoride (7789-75-5)	Yes	Yes	Yes	Yes

#### 16. Other Information

**Label Hazard Warning:** CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

Label Precautions: Use with adequate ventilation.

Keep container closed. Avoid breathing dust.

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Label First Aid:** If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

#### **Product Use:**

Laboratory Reagent.