

### PRODUCT IDENTIFICATION



**Product Name:** Calcium Chloride  
**CAS Number:** 10043-52-4  
**Molecular Formula:** CaCl<sub>2</sub>  
**Molecular Weight:** 110.98 g/mol  
**Grade:** Technical Grade  
**Purity / Concentration:** 94-97  
**Synonyms:** Calcium Dichloride, CaCl<sub>2</sub>

### PRODUCT OVERVIEW

Calcium Chloride (CAS 10043-52-4) is a highly effective Technical Grade chemical provided as a white, crystalline solid with a 94-97% purity concentration. Known for its exceptional hygroscopic properties, this versatile compound is widely utilized in industrial de-icing, moisture control, and chemical synthesis processes.

**Grade Significance:** Technical Grade indicates that this product is formulated for industrial and commercial applications where high purity and cost-effectiveness are required, rather than for food or pharmaceutical use.

### CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	96	94	97	Titration with EDTA
Color (APHA)	APHA	10	—	20	Visual Comparison
Residue After Ignition	%	0.1	—	0.5	Gravimetric Analysis
Water Content	%	1.5	—	3	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	1	—	10	ICP-OES
Iron (Fe)	ppm	5	—	20	ICP-OES
Chloride (Cl <sup>-</sup> )	ppm	50	—	200.0	Ion Chromatography
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	ppm	10	—	50	Turbidimetry

ND = Not Detected. Values are typical and may vary by lot.

### PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	White, fine crystalline powder, hygroscopic	<b>Odor</b>	Odorless
<b>Form</b>	Solid	<b>Boiling Point</b>	1935°C (3515°F)
<b>Melting / Freezing Point</b>	782°C (1439.6°F)	<b>Flash Point</b>	Not applicable
<b>Specific Gravity</b>	2.15	<b>Solubility</b>	Highly soluble in water, moderate in alcohol
<b>Molecular Formula</b>	CaCl <sub>2</sub>	<b>Molecular Weight</b>	110.98 g/mol
<b>Vapor Pressure (20°C)</b>	0.0 mmHg (negligible)	<b>Density (25°C)</b>	2.15 g/mL

## APPLICATIONS

1. **Infrastructure** — Used extensively for melting ice and snow on roads and sidewalks to maintain safe travel conditions during winter months.
2. **Construction** — Effective in controlling humidity levels at construction sites to protect sensitive materials and improve workspace conditions.
3. **Industrial Processing** — Utilized in various drying applications due to its strong ability to absorb moisture from the surrounding environment.
4. **Chemical Manufacturing** — Serves as a reliable reagent in a wide range of chemical reactions, providing consistent performance for industrial formulation.

## STORAGE & HANDLING

Because calcium chloride is highly hygroscopic, it must be stored in a tightly sealed container in a dry, well-ventilated area to prevent it from absorbing moisture from the air and clumping. Proper storage is essential to maintain product integrity and ensure safety, as the material can cause serious eye irritation if handled improperly.

- Store in a cool, dry place away from moisture.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.
- Avoid contact with incompatible materials such as strong acids.
- Ensure proper ventilation in storage areas to prevent dust accumulation.
- Keep containers tightly closed when not in use.

## AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 50 Lbs.

## SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Warning**



### Hazard Statements:

- H319: Causes serious eye irritation [Warning Serious eye damage/eye irritation]

**Emergency Contact:** CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

*For complete safety information, refer to the Safety Data Sheet (SDS) for this product.*

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Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | [www.alliancechemical.com](http://www.alliancechemical.com)

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