

PRODUCT IDENTIFICATION

**Product Name:** Calcium Chloride Technical Grade**CAS Number:** 10043-52-4**Molecular Formula:** CaCl_2 **Molecular Weight:** 110.98 g/mol**Grade:** Technical Grade**Purity / Concentration:** 94-97**Synonyms:** Calcium Dichloride, CaCl_2

PRODUCT OVERVIEW

Calcium Chloride Technical Grade is a highly effective, hygroscopic white crystalline powder with a 94-97% purity profile. Featuring a low alkalinity of 0.03 and minimal insoluble matter, this compound is engineered for superior performance in industrial drying and de-icing applications.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial use where high performance is required, but it is not intended for pharmaceutical, food, or cosmetic applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay	%	94	94	—	Titration/Gravimetric
pH	—	9.7	7	10	pH Meter
Calcium Ca	%	0.04	0	0.2	ICP-MS
Heavy Metals As Pb	ppm	6	—	50	ICP-MS (as Pb)
Iron	%	0.0010	—	0.0050	ICP
Magnesium Mg	%	ND	—	0.5	ICP-MS
Chloride Cl	%	4.2	0	5	ICP
Sulfate (SO_4^{2-})	%	0.02	—	0.2	ICP-MS
Alkalinity	—	0.03	—	0.1	Per specification
Insoluble Matter	%	0.045	0	0.15	Gravimetric

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White, fine crystalline powder, hygroscopic	Odor	Odorless
Form	Solid	Boiling Point	1935°C (3515°F)
Melting / Freezing Point	782°C (1440°F)	Flash Point	Not applicable
Specific Gravity	2.15	Solubility	Highly soluble in water, moderate in alcohol
Molecular Formula	CaCl_2	Molecular Weight	110.98 g/mol
Vapor Pressure (20°C)	0.0 mmHg (negligible)	Density (25°C)	2.15 g/mL

APPLICATIONS

1. **Infrastructure and Road Maintenance** — Used extensively as a de-icing agent to melt snow and ice on roads and sidewalks, preventing hazardous conditions.
2. **Construction** — Functions as a humidity control agent on construction sites to stabilize moisture levels and improve material curing.
3. **Chemical Processing** — Serves as a reliable reagent in various chemical synthesis reactions due to its consistent concentration and purity.
4. **Industrial Desiccation** — Utilized in drying applications to absorb ambient moisture, protecting sensitive equipment and storage environments.

STORAGE & HANDLING

Because this product is highly hygroscopic, it must be stored in an airtight container to prevent moisture absorption and clumping. Improper storage can compromise the chemical integrity of the material and may increase the risk of irritation, as the substance is classified with a warning for serious eye irritation.

- 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

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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