

## Technical Data Sheet (TDS)

### 1. Product Overview

- Product Name: Calcium Chloride
- English Name: Calcium Chloride
- CAS Number: 10043-52-4
- Formula:  $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$
- Molecular Weight: 147.02 g/mol
- Product Characteristics: High-purity white flake/granular solid, highly hygroscopic, soluble in water with exothermic reaction. Exhibits excellent deicing, dust-suppression, and water-hardening properties. Stable under normal storage.

### 2. Technical Specifications

Item	Specification
Appearance	White flake/granular solid
Purity ( $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ )	$\geq 97.0\%$
pH Value (5% aqueous solution, 25°C)	7.0-9.0
Moisture Content	$\leq 1.0\%$
Heavy Metals (Pb)	$\leq 0.001\%$
Iron (Fe)	$\leq 0.005\%$
Magnesium (Mg)	$\leq 0.5\%$
Insoluble Matter in Water	$\leq 0.1\%$
Alkalinity (as $\text{Ca}(\text{OH})_2$ )	$\leq 0.2\%$
Solubility (20°C)	$\geq 700 \text{ g/L}$

### 3. Product Advantages

- High purity and effective performance in various applications.
- Fast dissolution rate and exothermic property enhance deicing efficiency.
- Strong hygroscopicity for excellent dust control.
- Cost-effective and versatile.
- Food-grade option available (meets FDA standards).

### 4. Application Fields

- Deicing & Anti-icing: Roads, highways, airports, sidewalks (lowers freezing point of water).
- Dust Control: Construction sites, mines, unpaved roads (absorbs moisture to suppress dust).
- Construction: Concrete accelerator (shortens setting time); mortar additive.
- Water Treatment: Hardening agent; wastewater treatment (removes impurities).
- Food Industry: Firming agent for fruits/vegetables; cheese making; brine for refrigeration.
- Other: Desiccant; chemical intermediate; oil drilling fluid additive.

### 5. Usage Methods

- Deicing: Spread directly at 20-50 g/m<sup>2</sup> (adjust based on snow/ice thickness).



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- Dust Control: Dilute to 20-30% solution, spray at 1-2 L/m<sup>2</sup>.
- Concrete Acceleration: Add 1-3% of cement weight to concrete mixture.
- Food Industry: Use in accordance with food safety limits ( $\leq 1.5$  g/kg in finished products).
- Optimal Conditions: Use at -20°C to 35°C; avoid contact with strong acids.

### 6. Packaging & Storage

- Packaging Specifications: 25 kg/bag (plastic-lined kraft bag), 50 kg/drum (HDPE), 1000 kg/IBC tote.
- Storage Conditions: Store in cool, dry, well-ventilated warehouse. Keep container tightly closed to prevent moisture absorption. Temperature  $\leq 30^\circ\text{C}$ .
- Shelf Life: 24 months (unopened).
- Transportation: Handle as UN1789, avoid moisture and collision.

### 7. Safety & Protection

- Wear chemical splash goggles, nitrile gloves, and protective clothing during handling.
- Avoid eye and skin contact; immediately rinse with plenty of water if contact occurs.
- Do not ingest; seek medical attention if accidentally swallowed.
- Keep away from strong acids and incompatible materials.

### 8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Food-grade products meet FDA and national food safety standards.
- Each batch accompanied by COA.

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