

SPECIFICATION

Product Name: Precipitated Calcium Carbonate
Chemical Formula: CaCO ₃
CAS Number: 471-34-1
Molecular Weight: 100.09 g/mol
Appearance: White fine powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Identification	-	Complies	Positive for calcium and carbonate
Assay	%	99.4%	98.0 - 100.5%
Calcium carbonate content	%	99.4%	NLT 98%
pH (10% Suspension)	-	9.4	8.5 – 10.5
Loss on Drying (105°C)	%	0.20%	NMT 0.5%
Acid Insoluble Matter	%	0.05%	NMT 0.2%
Residue on 325 Mesh (45 µm)	%	0.10%	NMT 0.2%
Bulk Density	g/ml	0.50 g/mL	0.30–0.70 g/mL
Heavy Metals (as Pb)	PPM	Complies	NMT 10 PPM
Lead (Pb)	PPM	Complies	NMT 2 PPM
Arsenic (As)	PPM	Complies	NMT 3 PPM
Cadmium (Cd)	PPM	Complies	NMT 1 PPM

Mercury (Hg)	PPM	Complies	NMT 0.1 PPM
Iron (Fe)	PPM	50 PPM	NMT 200 PPM
Whiteness	%	98%	NLT 95%

Physical Properties

- Solubility: Insoluble in water. Soluble in hydrochloric acid. Soluble in acetic acid. Insoluble in ethanol. Insoluble in acetone.

Shelf Life & Storage

- Shelf Life: 5 years from date of manufacture under recommended storage.
- Storage Conditions: Store in a cool, dry, and well-ventilated place at 15–30°C. Protect from moisture, excessive humidity, direct sunlight, and contamination. Keep the container tightly closed in the original, properly labeled packaging to prevent moisture absorption and caking. Store away from strong acids and incompatible materials, as acids react with calcium carbonate and release carbon dioxide (CO₂). Proper storage helps maintain the product's purity, free-flowing properties, particle size distribution, and stability.

Applications

- Use: Widely used as a calcium source, filler, opacifying agent, whitening agent, and functional additive in pharmaceutical, nutraceutical, food, cosmetic, and industrial formulations. In pharmaceutical and nutraceutical products, it is commonly incorporated into tablets, capsules, chewable tablets, powders, sachets, and calcium supplements as a source of calcium and as a tablet diluent. In the food industry, it is used as a food fortifying agent and anti-caking agent (food-grade material only). Industrially, it is extensively used in the manufacture of paper, plastics, rubber, paints, coatings, adhesives, sealants, inks, and ceramics, where it improves whiteness, opacity, surface finish, mechanical strength, and processing performance.
- Dosage: Depends on its grade (pharmaceutical, food, or industrial) and intended application.

Packaging

- Standard Packing: 50 Kgs woven pp bag with inner liner and 100 Grams or as per customer requirement.
- Labeling: Product name, batch number, net weight, manufacture date, expiry date, and manufacturer details.

* Specifications are based on the manufacturer's provided specifications.