

SPECIFICATION

Product Name: Calcium Stearate
Chemical Formula: $\text{Ca}(\text{C}_{18}\text{H}_{35}\text{O}_2)_2$
CAS Number: 1592-23-0
Molecular Weight: 607.03 g/mol
Appearance: White powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Identification	-	Complies	Positive for calcium and stearate
Assay	%	98.8%	95.0 – 100.5%
Calcium content	%	6.8%	6.5 – 7.5%
Free fatty acid	%	1.2%	NMT 3.0%
Loss on drying	%	0.8%	NMT 3.0%
Acid value	mg KOH/g	2.1 mg KOH/g	NMT 5.0 mg KOH/g
Heavy metals	PPM	Complies	NMT 10 PPM
Lead	PPM	Complies	NMT 2 PPM
Arsenic	PPM	Complies	NMT 1 PPM
Cadmium	PPM	Complies	NMT 1 PPM
Mercury	PPM	Complies	NMT 0.1 PPM
Bulk density	g/ml	0.30 g/ml	0.20 – 0.40 g/ml

Physical Properties

- Solubility: Insoluble in water. Insoluble in ethanol. Insoluble in acetone. Soluble in ether.
Soluble in Chloroform. Insoluble in mineral oils.

Shelf Life & Storage

- Shelf Life: 2 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 oxidizing agents, strong acids, and incompatible materials. Proper storage helps maintain the product's free-flowing properties, lubricating performance, purity, and stability.

Applications

- Use: Widely used as a lubricant, anti-caking agent, flow aid, release agent, and stabilizer in pharmaceutical, nutraceutical, food, cosmetic, plastic, rubber, and chemical formulations. In pharmaceutical and nutraceutical products, it is commonly incorporated into tablets, capsules, powders, and granules to improve powder flow, reduce friction during compression, prevent sticking to punches and dies, and enhance manufacturing efficiency. In the food industry (food-grade material only), it is used as an anti-caking and processing aid. Industrially, it is used as a lubricant, mold release agent, acid scavenger, and water-repellent additive in the manufacture of plastics, rubber products, paints, coatings, and construction materials.
- Dosage: Depends on the formulation, manufacturing process, and the desired lubricating or anti-caking effect.

Packaging

- Standard Packing: 25 Kgs woven pp bag with inner liner 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.