

SPECIFICATION

Product Name: Tri Calcium Phosphate BP/USP Grade
Chemical Formula: $\text{Ca}_3(\text{PO}_4)_2$
CAS Number: 7758-87-4
Molecular Weight: 310.18 g/mol
Appearance: White or almost white, crystalline powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min/Max)
Solubility	%	Complies	Practically insoluble in water and in ethanol (96%). It dissolves in dilute hydrochloric acid and in dilute nitric acid.
Identification Test A Test B Test C	g/ml	Complies	It responds to the following test: A white precipitate is formed. A yellow precipitate of ammonium phosphomolybdate is formed. It complies assay limit of calcium.
Carbonate	%	Complies	No effervescence occurs.
Sulphate	%	0.2	The turbidity of the Sample does not exceed that of the Standard (NMT 0.8%).
Chloride	%	0.08	The turbidity of the Sample does not exceed that of the Standard (NMT 0.14%).

Barium	-	Complies	No turbidity is produced within 15 min
Phosphate	%	17.2	17 - 18
Arsenic	μ/gm	1.77	NMT 3 μ/gm
Acid insoluble substance	%	0.1	Residue NMT 0.2 %
Fluoride	PPM	40	NMT 75 ppm
Assay	%	36	NLT 34.0 % and NMT 40.0% w/w of calcium
Loss on ignition	%	2	NMT 8.0%

Physical Properties

- Solubility: Practically insoluble in water. Insoluble in ethanol. Soluble in dilute acids.

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. Keep containers tightly closed to prevent moisture absorption. Protect from humidity and direct sunlight. Store at room temperature (15–30°C). Keep away from strong acids, as it reacts with acids. Use airtight HDPE drums or bags with inner liners for bulk storage.

Applications

- Use: Diluent/filler in tablet and capsule formulations. Acts as an anti-caking agent to improve powder flow. Used as a calcium supplement in medicinal formulations. Helps in tablet compression due to good flow properties.
- Dosage: Depends on formulation and regulatory guidelines (pharmaceutical, nutraceutical, or food use).

Packaging

- Standard Packing: 25 kg HDPE bags with inner liner or as per customer requirement.



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- Labeling: Product name, batch number, net weight, manufacture date, expiry date, and manufacturer details.

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

