

SPECIFICATION

Product Name: Tri Calcium Phosphate Food 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	A white precipitate is formed. A yellow precipitate of ammonium phosphomolybdate is formed. It complies assay limit of calcium.
Carbonate	%	No effervescence occurs	No effervescence occurs.
Sulphate	%	Turbidity 0.05 %	The turbidity of the Sample does not exceed. that of the Standard (NMT 0.8%)

Chloride	%	No turbidity	The turbidity of the Sample does not exceed. that of the Standard (NMT 0.14%).
Barium	-	No turbidity	No turbidity is produced within 15 min
Arsenic	μ/gm	Not detected	NMT 3 μ/gm
Acid insoluble substance	%	0.05	Residue NMT 0.2 %
Fluoride	PPM	34	NMT 75 ppm
Assay	%	38.9	NLT 34.0 % and NMT 40.0% w/w of calcium
Loss on ignition	%	7.1	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. Maintain temperature at room temperature (15–30°C). Keep containers tightly closed and moisture-proof. Protect from humidity and direct sunlight. Use food-grade approved packaging (HDPE drums/bags with inner liners). Keep away from strong acids and contaminants.

Applications

- Use: Used as an anti-caking agent (INS/E341(iii)) in powdered products like milk powder, spices, salt, and baking mixes. Acts as a calcium fortifying agent in cereals, beverages, and nutritional foods.
 - Dosage: Depends on product formulation and processing conditions.

Packaging

- Standard Packing: 25 kg woven PP bags with inner liner, 1Kgs and 100grams, 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.