

Technical Data Sheet

Product description:

Ceramat β -TCP powder is a calcined β -tricalcium phosphate powder manufactured by CERMAT.

IUPAC name: Tricalcium diphosphate

Product name: β -tricalcium phosphate (β -TCP) powder

Molecular formula: β -Ca₃(PO₄)₂

Molecular weight: 310.18 g/mol

CAS Number: 7758-87-4

Product Specifications

S.No.	Tests	Method	Specifications
1.	Phase Purity	X-ray diffraction	• β -TCP ≥ 95 % Conforms with ICDD file no. 09-0169 As per ASTM F1088-04
2.	Ca/P ratio	X-ray Diffraction	1.50 - 1.60
3.	Additional Phase	X-ray diffraction	• (HA + α -TCP + TTCP + CaO) ≤ 5 % • CaO ≤ 1 %
4.	Appearance	Visual	White powder with no colored particles (impurities)
5.	Bulk density	Manual	0.2 to 0.8 g/cc
6.	Particle Size	Sieving method	< 100 μm^*
7.	Particle size distribution	Dynamic light Scattering (DLS)	Dv10: 1-10 μm^* Dv50: 15-30 μm^* Dv90: 50-70 μm^*
8.	Agglomerate size	Sieving method	< 2 mm**
9.	Crystallinity	X-ray Diffraction	> 90 %
10.	Heavy Metals	ICP-MS and ICP-OES	Pb ≤ 30 ppm; Hg ≤ 5 ppm; Cd ≤ 5 ppm; As ≤ 3 ppm

*Actual particle size distribution such as Dv(10), Dv(50) and Dv(90) will be carried out after sonication in water and will be given in the certificate of analysis for the batch.

**Agglomerates are present in the product (β -TCP powder) due to the production process. After sonication of the powder in water, the agglomerates break down to micron size particles.

Storage and Safety

Keep the container closed and store in a cool and dry place. Refer to MSDS for any additional information.

Shake before use to ensure homogeneity.