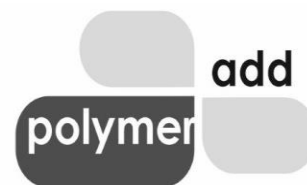


Polymer Add (Thailand) Co.,Ltd.

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Mobile - Thai : 0804531391, English: 0839415475, E-mail – contact@polymeradd.co.th



TECHNICAL DATA SHEET

TRICALCIUM PHOSPHATE (TCP) (MICRONIZED)

PRODUCT CLASSIFICATION

Item	Description
Chemical Name	Tricalcium Phosphate
CAS No.	7758-87-4
HS Code	2835.26.00
EINECS No.	231-840-8
Molecular Formula	$\text{Ca}_3(\text{PO}_4)_2$
Molecular Weight	~310.18 g/mol
Synonyms	TCP, Calcium Phosphate Tribasic

PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description	Test Method
Appearance	White micronized powder	Visual
Odor	Odorless	Sensory
Assay ($\text{Ca}_3(\text{PO}_4)_2$)	≥ 98%	Titration
Moisture	≤ 1.0%	Oven drying at 105 °C
pH (10% slurry)	6.5 – 8.0	pH meter
Specific Gravity	~3.0 – 3.2	Pycnometer
Bulk Density	0.50 – 0.80 g/cm ³	Tapped Density
Oil Absorption	25 – 45 g/100 g	ASTM D281
Particle Size (D50)	3 – 8 μm	Laser Diffraction
Particle Size (D90)	< 25 μm	Laser Diffraction
Whiteness	≥ 90%	Reflectance

➤ The commercial product specification may include only a selection of the properties listed above; this additional data is provided for general technical reference.

HEAVY METALS (EU REGULATION 10/2011 – CONTENT LIMITS IN ADDITIVES)

Element	Typical Limit	Test Method
Lead (Pb)	≤ 2 ppm	ICP, AAS
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 1 ppm	ICP, CV-AAS
Arsenic (As)	≤ 1 ppm	ICP, AAS

USES / APPLICATION (MICRONISED / SOLID-STATE RELEVANT)

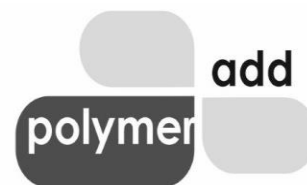
Industry	Application	Use
Polyolefins (PE, PP)	Functional filler	Improves stiffness, opacity, and dimensional stability
PVC Processing	Reinforcing filler	Enhances rigidity and processing consistency

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Engineering Plastics	Mineral filler	Improves dimensional control and mechanical strength
Masterbatch & Compounds	Carrier / extender	Improves dispersion and cost optimization
Rubber Processing	Inert filler	Improves processing consistency and surface finish
Coatings (Powder Systems)	Extender pigment	Improves opacity, matting, and surface texture
Adhesives & Sealants (Solid Systems)	Functional filler	Improves rheology and formulation stability
Functional Fillers & Mineral Systems	Density modifier	Balances density and mechanical performance
Powder Processing & Dry Blends	Anti-caking agent	Improves flowability and reduces agglomeration
Polymer–Paper / Composite Systems	Functional filler	Enhances opacity, bulk, and surface smoothness

US FDA 21 CFR LISTING

CFR Section	Title / Description
21 CFR 182.1217	Generally recognized as safe (GRAS) substance under specified conditions
21 CFR 176.170	Permitted for use in paper and paperboard in contact with food under specified conditions

Compliance with applicable use levels, migration limits, and end-use conditions must be verified by the user.

DISCLAIMER

This product is intended for industrial use in polymer, coating, rubber, adhesive, and specialty chemical applications. It is not recommended for pharmaceutical or direct food use unless separately certified. Compliance with food-contact and regional regulatory approvals must be verified by the user. Values above are typical for general reference and not binding specifications unless explicitly confirmed in writing.