

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalaremprikiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

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



## TECHNICAL DATA SHEET

### ALUMINUM SILICATE (MICRONIZED)

#### PRODUCT CLASSIFICATION

Item	Description
Chemical Name	Aluminium Silicate
CAS No.	1332-58-7 (Kaolin type) / 1344-28-1 (synthetic variants)
HS Code	2507.00.00
EINECS No.	310-194-1 (Kaolin)
Molecular Formula	$Al_2Si_2O_5(OH)_4$ (typical)
Molecular Weight	~258 g/mol
Synonyms	Kaolin, Hydrated Aluminum Silicate

#### PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description	Test Method
Appearance	White to off-white micronized powder	Visual
Odor	Odorless	Sensory
Purity ( $Al_2O_3 + SiO_2$ )	≥ 95%	XRF
pH (10% slurry)	5.0 – 7.5	pH meter
Loss on Ignition (LOI)	10 – 14%	Furnace
Moisture	≤ 1.5%	Oven drying
Bulk Density	0.30 – 0.60 g/cm <sup>3</sup>	Tapped Density
Oil Absorption	30 – 50 g/100g	ASTM D281
Particle Size (D50)	2 – 5 μm	Laser Diffraction
Particle Size (D90)	< 20 μm	Laser Diffraction
Whiteness	≥ 85%	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

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## USES / APPLICATION (MICRONISED / SOLID-STATE RELEVANT)

Industry	Commercial Application / Uses
Polyolefins (PE, PP)	Functional filler; improves stiffness, dimensional stability, and surface finish
PVC Processing	Reinforcing filler; enhances rigidity, surface smoothness, and processing stability
Engineering Plastics	Filler for improved mechanical properties and thermal resistance
Masterbatch & Compounds	Carrier and extender for pigments; improves dispersion and cost optimization
Rubber Processing	Reinforcing filler; improves tensile strength, abrasion resistance, and processability
Coatings (Powder Systems)	Matting and anti-settling agent; improves opacity and surface texture
Adhesives & Sealants (Solid Systems)	Rheology modifier and filler; enhances consistency and stability
Functional Fillers & Mineral Systems	Extender filler; improves bulk properties and formulation balance
Powder Processing & Dry Blends	Improves flow, reduces caking, and enhances handling of fine powders
Paper & Board (Dry Additive Use)	Filler to improve opacity, brightness, and surface smoothness

## US FDA 21 CFR LISTING

CFR Section	Title / Description
21 CFR 176.170 / 178.3620	Aluminum silicate is permitted for use in food-contact paper and as an indirect additive under specified conditions.

For polymer and industrial applications, compliance with specific use conditions and regulatory limits must be verified by the user.

## DISCLAIMER

This product is intended for industrial use in polymer, coating, or 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.

**Month of Creation:** July 2025

**Month of Review:** July 2027