Polymer Add (Thailand) Co.,Ltd.
Office - 106, Chalaremprakiat, 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
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TECHNICAL DATA SHEET

POTASSIUM ALUMINIUM SILICATE (SYNTHETIC) MICRONIZED

PRODUCT CLASSIFICATION

Item	Description
Chemical Name	Potassium Aluminium Silicate (Synthetic)
CAS No.	1318-02-1
HS Code	2842.10.00
EINECS No.	215-283-8
Molecular Formula	$KAlSi_3O_8$ *(typical framework composition)*
Molecular Weight	~278.33 g/mol
Synonyms	Synthetic Feldspar, Potassium Aluminosilicate

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 + K_2O)	≥ 95%	XRF
Moisture	≤ 1.0%	Oven drying at 105 °C
pH (10% slurry)	6.0 – 8.5	pH meter
Specific Gravity	~2.5 – 2.7	Pycnometer
Bulk Density	0.60 – 0.90 g/cm^3	Tapped Density
Oil Absorption	20 – 40 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

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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 and processing stability
Engineering Plastics	Mineral filler for improved dimensional control and mechanical performance
Masterbatch & Compounds	Carrier and extender; improves dispersion and cost optimization
Rubber Processing	Inert filler; improves processing consistency and surface properties
Coatings (Powder Systems)	Extender pigment; improves opacity, gloss control, and surface texture
Adhesives & Sealants (Solid Systems)	Filler for rheology control and formulation stability
Functional Fillers & Mineral Systems	Extender filler; balances density, whiteness, and mechanical properties
Powder Processing & Dry Blends	Improves flowability and reduces caking in fine powder systems
Polymer–Paper / Composite Systems	Enhances opacity, bulk, and surface smoothness in composite structures

US FDA 21 CFR LISTING

CFR Section	Title / Description
21 CFR 178.3297	Permitted as a colorant / additive in polymers 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.

Month of Creation: July 2025
Month of Review: July 2027