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

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

TECHNICAL DATA SHEET
MM-620

Chemical Name	**MICA (MICRONIZED)**
Grade Name	MM-620
CAS No	12001-26-2
HS Code	2525.20.00
EINECS No	310-127-6
Molecular Formula	$KAl_2(AlSi_3O_{10})(OH)_2$
Molecular Weight	398.5 g/mol
Synonyms	Muscovite Mica, Potassium Aluminum Silicate Hydroxide

Physical & Chemical Properties

Property	**Typical Value / Description**	**Test Method**
Appearance	Fine off-white to light gray powder	Visual
Odor	Odourless	Sensory
pH (10% slurry)	7.0 – 8.5	pH meter
Moisture Content	≤ 1.0%	Oven drying (110 °C) till constant weight
Bulk Density	0.25 – 0.45 g/cm^3	Tapped Density Method
Whiteness	≥ 85	CIE method (paste in mineral oil base)
Oil Absorption (DBP)	35 – 50 g/100g	Spatula Rub-Out Method
Melting Point	>1200°C (decomposes)	Literature / Estimation
Solubility in Water	Insoluble	Visual observation
Loss on Ignition (LOI)	4 – 7% (at 1000°C)	Heating in muffle furnace 900°C
Particle Size (D50)	Typically, 3 – 5 µm (grade-dependent)	Laser Diffraction (Wet method)
Particle Size (D99)	Typically, 10 – 30 µm (grade-dependent)	Laser Diffraction (Wet method)

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

Heavy Metals (EU Regulation 10/2011 - content limits in additives for plastics)

Element	**Typical Limit**	**Test Method**
Lead (Pb)	≤ 10 ppm	ICP, AAS, XRF
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 1 ppm	ICP, AAS, CV-AAS
Arsenic (As)	≤ 3 ppm	ICP, AAS
Chromium (VI)	ND – 0.1 ppm	UV-Vis (after NaOH extraction)

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

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

Colour Impacting Impurities

Element	Typical Max Limit (ppm)	Test Method
Iron (Fe)	≤ 4000 ppm	ICP, AAS, XRF
Manganese (Mn)	≤ 100 ppm	ICP, AAS, XRF
Chromium (Cr)	≤ 50 ppm	ICP, AAS, XRF
Copper (Cu)	≤ 50 ppm	ICP, AAS, XRF
Nickel (Ni)	≤ 30 ppm	ICP, AAS, XRF
Cobalt (Co)	≤ 20 ppm	ICP, AAS, XRF
Vanadium (V)	≤ 20 ppm	ICP, AAS, XRF

Product Performance Impacting Impurities

Ion / Element	Typical Max Limit (ppm)	Test Method
Calcium (Ca)	≤ 500 ppm	ICP, AAS, XRF
Magnesium (Mg)	≤ 500 ppm	ICP, AAS, XRF
Sodium (Na)	≤ 300 ppm	ICP, AAS, XRF
Potassium (K)	≤ 1000 ppm	ICP, AAS, XRF
Chloride (Cl^-)	≤ 100 ppm	Ion Chromatography
Sulphate (SO_4^{2-})	≤ 100 ppm	Ion Chromatography
Titanium (Ti)	≤ 200 ppm	ICP, AAS, XRF

USES / APPLICATION

Industry	Commercial Application / Uses (Micronized Grade)
Plastics	Reinforcing filler in PP, PE, PVC; improves dimensional stability and electrical insulation
Rubber	Enhances elasticity, weather resistance, and reinforcement in elastomers
Paints & Coatings	Anti-cracking, barrier properties, and gloss improvement in decorative and industrial paints
Paper	Improves surface smoothness and opacity in specialty papers
Adhesives & Sealants	Rheology control and crack resistance in construction and industrial sealants
Inks	Enhances pigment orientation and print finish in specialty inks

US FDA 21 CFR LISTING

CFR Section	Title / Description
178.3297	Colorants for polymers – when used as inert filler
176.170	Paper and paperboard in contact with aqueous and fatty foods
176.180	Paper and paperboard in contact with dry foods

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

Mica is considered inert and may be used in indirect food contact under specific conditions. Compliance must be verified based on end-use application.

Disclaimer

This product is manufactured in accordance with general industrial quality standards. While typical batches comply with EU 10/2011 heavy metal limits for additives and are monitored for key colour-impacting impurities, these parameters are not routinely tested and are not included in standard Certificates of Analysis unless specifically requested at time of order. Customers requiring guaranteed compliance for food-contact or colour-critical applications should request analytical certification prior to dispatch.

Month of Creation: June 2025
Month of Review: June 2027