

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriakiat, 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



MM-620 TECHNICAL DATA SHEET

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, 5 – 10 µm (grade-dependent)	Laser Diffraction (Wet method)
Particle Size (D99)	Typically, 20 – 40 µm (grade-dependent)	Laser Diffraction (Wet method)

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)

Colour Impacting Impurities

Element	Typical Max Limit (ppm)	Test Method
Iron (Fe)	≤ 4000 ppm	ICP, AAS, XRF
Manganese (Mn)	≤ 100 ppm	ICP, AAS, XRF

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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

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

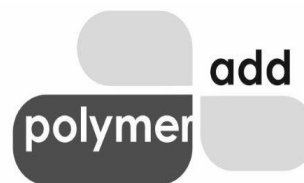
This product is manufactured in accordance with general industrial quality standards. While typical batches comply with EU 10/2011 heavy metal limits for additives and are monitored for key colour-

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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

POLYMERADD THAILAND