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

KC-258	**TECHNICAL DATA SHEET**

Chemical Name	**KAOLIN CLAY (MICRONIZED)**
Grade Name	KC-258
CAS No.	1332-58-7
HS Code	2507.00.00
EINECS No.	310-194-1
Molecular Formula	$Al_2Si_2O_5(OH)_4$
Molecular Weight	258.16 g/mol
Synonyms	Kaolinite, Hydrated Aluminium Silicate, China Clay, White Clay

Property	**Typical Value / Description**	**Test Method**
Appearance	Fine white to off-white powder	Visual
Odor	Odourless	Sensory
pH (10% slurry)	4.0 – 6.0	pH meter
Moisture Content	≤ 1.0%	Oven drying (110 Deg C) till constant weight
Bulk Density	0.3 – 0.5 g/cm^3	Tapped Density Method
Whiteness	≥ 88	CIE method (paste in mineral oil base)
Oil Absorption (DBP)	30 – 45 g/100g	Spatula Rub-Out Method
Melting Point	>1600°C (decomposes)	Literature / Estimation
Solubility in Water	Insoluble	Visual observation
Loss on Ignition (LOI)	12 – 15% (at 1000°C)	Heating in muffle furnace 900°C
Particle Size (D50)	Typically, 5 µm (grade-dependent)	Laser Diffraction (Wet method)
Particle Size (D99)	Typically, 20 µm (grade-dependent)	Laser Diffraction (Wet method)

Heavy Metals (EU Regulation 10/2011 (content limits in additives) Plastics (Food-Grade / Repeated Use)		
Element	**Typical Limit**	**Test Method**
Lead (Pb)	≤ 10 ppm	ICP, AAS, XRF
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 0.1 – 1 ppm	ICP, AAS, CV-AAS
Arsenic (As)	≤ 1 – 3 ppm	ICP, AAS
Chromium (VI)	ND – 0.1 ppm (if present)	UV-Vis (after extraction with NaOH)

Colour impacting impurities		
Element	**Typical Max Limit (ppm)**	**Test Method**
Iron (Fe)	≤ 3000 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

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

Product performance impacting impurities		
Ion / Element	**Typical Max Limit (ppm)**	**Test Method**
Calcium (Ca)	≤ 500 ppm	ICP, AAS, XRF
Magnesium (Mg)	≤ 300 ppm	ICP, AAS, XRF
Sodium (Na)	≤ 300 ppm	ICP, AAS, XRF
Potassium (K)	≤ 200 ppm	ICP, AAS, XRF
Chloride (Cl^-)	≤ 100 ppm	Ion Chromatography
Sulphate (SO_4^{2-})	≤ 100 ppm	Ion Chromatography
Titanium (Ti)	≤ 150 ppm	ICP, AAS, XRF

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.

USES / APPLICATION

Industry	**Commercial Application / Uses (Micronized Grade)**
Plastics	Filler and extender in PVC, polyolefins, and engineering plastics; improves rigidity and dimensional stability
Rubber	Reinforcing filler in natural and synthetic rubber; enhances processing and surface smoothness
Paints & Coatings	Opacity enhancer, anti-settling agent, extender for TiO_2 in architectural and industrial paints
Paper (Coating Grade)	Surface coating and filler to improve printability, smoothness, and brightness in high-grade papers
Adhesives & Sealants	Rheology control, anti-sagging agent, filler to enhance mechanical properties and reduce shrinkage
Inks	Viscosity modifier and extender in solvent- and water-based printing inks; improves print sharpness

US FDA 21 CFR LISTING

CFR Section	**Title / Description**
176.170	Components of paper and paperboard in contact with aqueous and fatty foods
176.180	Components of paper and paperboard in contact with dry foods
177.1200	Cellophane (permitted as filler or adjuvant in cellophane intended for food contact)
177.2260	Filters, resin-bonded (used as inert mineral filler in bonded filters for food use)

Kaolin is recognized as GRAS (Generally Recognized As Safe) under certain conditions. Actual applicability depends on final formulation and exposure conditions.

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

Product Disclaimer : This statement supersedes any Buyers documents. Seller makes no representation, Warranty, Express or Implied, Including of Merchantability of Fitness for a particular use, or purpose. No statement herein is to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence breach of warranty, strict liability, and tort or contact rising in connection with product(s). Buyers sole remedy and Sellers sole Liability for any claims shall be buyers purchase price. Data and results are based on controlled or lab work and must be confirmed by the buyer by testing for its indented conditions of use. This product is not tested for, and is therefore not recommended for, use for which prolonged contact with mucous membranes, abraded skin, or blood is intended, or for use for which implantation within human body is intended.

Month of Creation	May 2025
Month of Review	May 2027