



Kaolin Clay for Rubber and Plastics



VALUE FROM THE GROUND UP

Value from the ground up.

KaMin LLC is a new company with a 70-year tradition of exploring, mining and processing kaolin clay. Originally part of the J.M. Huber Corporation, today KaMin LLC is a portfolio company of IMin Partners.

A partnership with KaMin means value from the ground up. This means we go out of our way to find the very best people in every discipline, including the geologists in our exploration department, the engineers in our plants, our technicians in the lab and our customer service representatives who coordinate your shipments. This team of world-class professionals works tirelessly to continuously improve our processes and optimize our equipment and resources. We are committed to creating the greatest value possible for you. As the kaolin clay experts, we operate at the intersection of nature and technology.

KaMin offers a wide variety of clays that have been specially designed to improve the physical performance properties of rubber and plastic compounds. We invite you to browse our product offerings and sample our products. See why rubber and plastic manufacturers worldwide have partnered with us for decades to lower their costs and to improve the physical properties and performance of their compounds.

The chemistry of your formulations may be complex, but your choice of kaolin clay supplier is easy — KaMin, LLC.



Your choice in kaolin is easy.

Product	Particle Size Scale	Median Particle Size, Microns (Malvern LLS)	Surface Area BET (m ² /gram)	Brightness (TAPPI) % Reflectance	Bulk Density (Lbs/Cu Ft) Loose; Tamped	pH	Benefits
WATER WASHED CLAYS							
Modest Reinforcement, Low Grit, Rheology Improvement, Fracture Improvement, Aging Resistance							
Polyfil® 35	Coarse	7	8	83	28; 31	7	This extremely low oil absorption clay works very well at high loadings in extrusion applications where acid resistance and durability are required. Polyfil 35 offers acid resistance, reinforcement, and very low crystalline silica and salt content.
Polyfil® F	Fine	1.5	17	88	12; 15	7	This family of Polyfil products offer acid resistance, reinforcement, and very low crystalline silica and salt content. These clays are higher in brightness and offer improved consistency compared to air-floated clays.
Polyfil® FB	Fine	1.5	17	88	35; 42	7	
Polyfil® X	Fine	2.3	16	87	12; 16	7	
Polyfil® XB	Fine	2.3	16	87	36; 44	7	
Polyfil® HG	Ultrafine	0.5	21	88	50; 56	7	Polyfil HG and Polyfil HG90 are ultra-fine, very high brightness kaolin grades with a particle size similar to titanium dioxide, offering acid resistance, modest reinforcement, neutral pH, and extremely low crystalline silica and salt content.
Polyfil® HG90	Ultrafine	0.4	21	91	50; 56	7	
SURFACE TREATED WATER WASHED CLAYS							
Strongest Reinforcement, Replace Carbon Black, Silane Reduction or Elimination in Formulation, Improves Modulus and Tensile							
Nucap® 100G	Ultrafine	0.5	22	88	50; 56	7	Nucap 100G is a cost effective, moderate brightness, sulfur-functional silane treated clay for use in rubber as a partial thermal black replacement.
Nucap® 190W	Ultrafine	0.4	22	91	50; 56	6	Nucap 190W is a high brightness sulfur-functional silane treated kaolin used in white roofing membranes and white sidewalls. In addition to faster mixing, Nucap 190W may allow the formulator to reduce the amount of added silane. The treatment aids dispersion in soft, low shear compounds such as stoppers, tubing, and printing blankets.
Nucap® 290W	Ultrafine	0.4	22	91	50; 56	6	Nucap 290W is a high brightness sulfur-functional silane treated kaolin with the highest level of surface treatment to impart the best mechanical properties and water resistance. Silane treated clays mix in faster and may allow the formulator to reduce the amount of added silane. The treatment aids dispersion in soft, low shear compounds.
Nulok® 390	Ultrafine	0.4	22	91	50; 56	8.5	Nulok 390 is a high brightness, amino-functional silane treated water-washed kaolin, designed for peroxide curing sytems. The treatment aids dispersion in soft, low shear compounds.
DELAMINATED CLAYS							
Vapor and Gas Barrier, Platy Structure for Directional Reinforcement							
Polyfil® 611	Fine	1.3	18	91	38; 45	7	Polyfil 611 is a high brightness, fine particle size, “naturally delaminated” kaolin clay with moderate water demand. Polyfil 611 is ideally suited for a wide variety of rubber and plastics applications.
Polyfil® DL	Moderate	3.2	12	88	40; 47	7	Polyfil DL and Polyfil DLX have platy particles that reduce gas/vapor permeability and help improve gas retention properties in rubber inner liners and other applications. In the delamination process, KaMin processes kaolin particles (stacks of platelets, as they are found in nature) in special wet-grinding, attrition mills. The clay stacks are reduced to thin kaolin platelets. This platy structure can also provide modulus and hysteresis advantages for rubber articles such as seals, rollers, etc. due to this directional reinforcement.
Polyfil® DLX	Coarse	6.7	12	88	40; 45	7	
CALCINED CLAYS							
Less Water Pick-Up Means Less Degradation Via Water Transmission, Surface Treated Calcined Clays Improve Dispersion							
Polyfil® 70	Moderate	3.2	8	91	23; 28	6	Calcined clays, such as Polyfil 70, Polyfil 80 and Polyfil 90, are brighter than most water-washed clays, offering excellent processing and limited reinforcement. They impart outstanding wet/dry electrical properties due to the elimination of bound water during the calcining process. Compounds with calcined clays extrude smoothly and reduce stickiness in processing. These high brightness calcined kaolin clays are used to extend elastomeric and thermoplastics products, including wire and cable applications.
Polyfil® 80	Moderate	3.2	8	92	23; 28	6	
Polyfil® 90	Fine	1.5	16	93	14; 25	6	
Nylok® 171	Moderate	3.2	8	91	23; 28	8.5	This anhydrous silane-modified calcined clay speeds dispersion, reinforces and increases crosslink density in polyamide resin systems
Polyfil® WC	Moderate	3.2	8	91	23; 28	6	Polyfil WC is an anhydrous silane-modified calcined kaolin clay used in wire and cable and other thermoplastic applications. It is designed to reduce water vapor transmission, yields excellent wet and dry electrical properties, and also good long-term stability in EPR and cross-linked polyethylene. Calcined clays impart low conductivity due to the elimination of bound water during the calcining process. Compounds with calcined clays extrude smoothly and reduce stickiness in processing.
Polyfil® WC 426	Fine	1.5	16	93	14; 25	6	Polyfil WC-426 is an anhydrous silane-modified calcined kaolin clay designed to maximize compatibility with surrounding polymers and to minimize absorption of interfacial moisture. Mechanical and electrical properties of polymers such as EPR and cross-linked polyolefins are preserved even after long-term exposure to a high-humidity environment. Calcined clays have low conductivity due to the elimination of bound water during the calcined process. Compounds with calcined clays extrude smoothly and reduce stickiness in processing.

Applications

Tires
Solid Rubber Tires
Splash Guards/Wheel Covers
Seals/Gaskets/O-Rings
Insulators
Hose/Belts
White Roofing Membranes
Wire/Cable
Flooring
SMC/BMC Compounds
Medical Rubber Goods
Footwear
Printing Rollers and Blankets

WATER WASHED CLAYS

Polyfil® 35			•			•			•	•		•	
Polyfil® F			•	•		•	•	•	•	•	•	•	•
Polyfil® FB			•	•		•	•	•	•	•	•	•	•
Polyfil® X			•	•		•	•	•	•	•	•	•	
Polyfil® XB			•	•		•	•	•	•	•	•	•	
Polyfil® HG	•	•	•	•	•	•	•	•	•	•	•	•	•
Polyfil® HG90	•	•	•	•	•	•	•	•	•	•	•	•	•

SURFACE TREATED WATER WASHED CLAYS

Nucap® 100G	•	•	•	•	•	•	•	•	•		•	•	•
Nucap® 190W	•	•	•	•	•	•	•	•	•		•	•	•
Nucap® 290W	•	•	•	•	•	•	•	•	•		•	•	•
Nulok® 390	•	•	•	•	•	•	•	•	•		•	•	

DELAMINATED CLAYS

Polyfil® 611	•	•	•	•		•	•	•	•	•	•	•	•
Polyfil® DL	•	•	•	•		•	•		•		•	•	•
Polyfil® DLX	•			•		•		•			•		

CALCINED CLAYS

Polyfil® 70				•	•	•		•	•		•		
Polyfil® 80				•	•	•		•					
Polyfil® 90				•	•	•		•					•
Nylok® 171			•										
Polyfil® WC				•	•	•		•					
Polyfil® WC 426				•	•	•		•					



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