

GREEN AS WHITE CAN BE



KAOLINS FOR  
ADHESIVES, CAULKS &  
SEALANTS APPLICATIONS

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## ABOUT US

Imerys is a world leader in white minerals and mining. Kaolin is a naturally-occurring, layered Aluminosilicate mineral used in a myriad of industries. Imerys Kaolin has been mining kaolin clay from middle Georgia for over one hundred years. We have dedicated resources to better understand how our kaolins can improve customer products to provide a competitive edge in these markets.

Imerys Kaolins are processed, refined and engineered to complement our customer's production processes, improving quality and raising the performance of customers' products. Imerys Kaolin offers tailor-made solutions, including surface-modifications, which can further enhance the mineral special functionality performance including but not limited to exceptional hydrophobicity, very good dispersion and improved mechanical properties in the Adhesives, Sealants & Caulks industry.

## KAOLINS IN ADHESIVES, CAULKS & SEALANTS

Some recent successes of Imerys Kaolins are:

- Improved dry time for water-based adhesives that significantly improved throughput for customers.
- Rheology modification to reduce slump in water-based adhesive,
- Use as an economic and functional extender in an acrylic emulsion improving cohesive strength. We also have data to suggest improved cohesive and impact strength for epoxies and acrylic formulations.
- Improved moisture vapor transmission in films and plastics with unique kaolin structures

Imerys Kaolins are used for many facets in the adhesive industry. Physical property enhancements include tear resistance, impact resistance, cohesive strength improvement, and improved electrical properties. In starch and synthetic resin systems, kaolins improve flow characteristics, penetration, adhesion, and dry time. Kaolins can also be used as rheology modifiers in all systems.

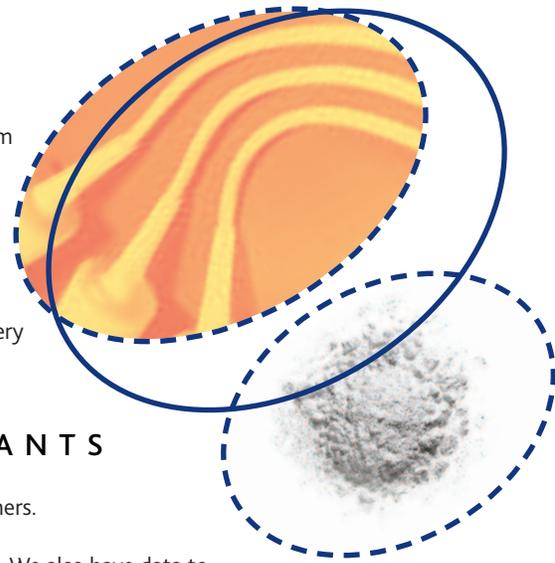
Imerys Kaolins are naturally acid resistant. When added as fillers, Imerys Kaolins show good acid resistance and reduce the cost of the formulation. Imerys Kaolins reduce shrinkage, offer dimensional stability, viscosity modification, and pigmentation to many adhesive formulations. Imerys Kaolins can be widely used in several polymeric systems including rubber, vinylic polymers, epoxies, polyamides, polysulphides, polyesters, phenol-formaldehyde resins, and silicones/silylated polymers.

In mold-in-place gaskets and one-component elastomeric systems, Imerys Kaolins improve low chemical reactivity, compression set and enhanced reinforcement capability. Calcined kaolin is an anhydrous aluminum silicate produced by heating fine natural kaolin in a kiln. The calcination process increases whiteness and hardness, improves electrical properties, and alters

the size and shape of the kaolin particles. Imerys calcined kaolins can be used in MS polymers, silicones, epoxies and urethanes as functional fillers.

When included in cable insulation compounds, calcined kaolin and surface treated calcined kaolin improve mechanical and electrical properties by reducing energy losses in power transmission. Our product range includes specialty metakaolins for low voltage PVC compounding as very efficient ion scavengers, up to surface modified very low dielectric constant and high hydrophobicity calcined kaolins for EPDM compounding and medium and high voltage insulation. These same properties can be used for adhesives in the electronics industry.

Imerys Kaolin also offers some unique morphology products including two hyper-platy kaolins: Hydrite® SB 60 and Hydrite® SB 100. These clays are characterized by very high aspect-ratio and can provide very good barrier (creating a tortuous path) and mechanical performance. We also offer Hydrite® TS 90 which is a unique super ultra fine kaolin clay that can perform as very efficient rheology and opacity extender in adhesives formulations.



## PRODUCTS FOR ADHESIVES, CAULKS & SEALANTS

Grade	Brightness (GE % of MgO)	Mean particle size Median sedigraph (micron)	Applications
Hydrite® SB 100	86	1.2	Solvent-Based Adhesives   Starch   PVOH   Films
Hydrite® SB 60	88	0.4	Dextrin   Starch   PVOH   PVA   Films
Hydrite® Flat D	81.5	4.0	Dextrin   Starch   PVOH
MetaStar™ 501	86	1.2	Sodium Silicates   Electronics applications
PoleStar™ 400	92	0.6	1k Polyurethanes   MS Polymers   Cyanoacrylates Gasket/Flange Anaerobics   Epoxies
Glomax™ LL	91	1.5	1k Polyurethanes   MS Polymers   2k PU Cyanoacrylates Acrylics
Hydrite® TS 90	90	0.2	Epoxies

## MORE INFORMATION

### Imerys Kaolin

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