



Toll Processing

Featured Application: Silane Treatment

WWW.MALVERNMINERALS.COM

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MM Events

- MM will be attending the NACE in Houston from March 14—17.
- Contact Brian Neal at 501-282-3336 to set up a meeting at the show

MM Facts

- We offer 12+ treated mineral fillers
- Industry expertise with all fillers
- 64 Years Servicing the Coatings Industry
- One stop shop for all toll services

Did you know?

- Malvern Minerals was established in 1947
- We pioneered the use of silane treated minerals
- Novacite® is the only known occurrence of a plate shaped SiO₂

Featured Distributor:

D&F Distributing

Featured Sales Personnel:
Gary Granello, D&F
(Dallas, TX)

“Gary offers great value to R&D due in no small part to his years in the lab as a coatings chemist. Call him today at (214) 520-1334”

Functional Filler Enhancement - “Silane Treating”

The Dilemma

Maybe you have experienced one of the following: “We had to throw out an entire batch because of poor mineral dispersion”! Or, “Due to the high humidity, our electrical properties just plummeted”!

For years, coating manufacturers and end users have encountered challenges while using mineral fillers within a coating application. These issues have created a surge in research as how to improve the system through mineral enhancements.

There is a Solution

Naturally occurring minerals often present hurdles regardless of the best efforts in mining and processing. As a solution, chemists have recognized the benefits of silane treating these minerals prior to adding them into the mix.

Many minerals, especially silica, contain surface areas

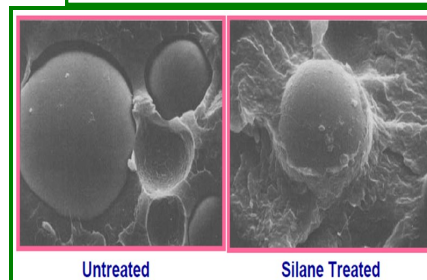
highly susceptible to chemical bonds. Silane treating a mineral’s surface offsets the irregularities of the raw mineral by encapsulating them and creating strong bonds to the resin system and substrate.

Due to this coupling, we see improvements in: properties, reductions in cost and strengthening of the overall system.

Key benefits of treatment:

- Improves dispersion
- Reduces heat generated during extrusion/processing
- Improves mechanical properties:
 1. Tear Strength
 2. Tensile Strength
 3. Impact resistance
- Reduces VOC’s
- Increases adhesion
- Increases flexural strength
- Increases CPVC

MATERIAL ENHANCEMENT WITH SILANE



Untreated

Silane Treated

- Improves processing
- Improves rheology control
- Improves wet electrical insulation
- Increases composite strength

Malvern Minerals has been a pioneer in silane treating not only of our lamellar quartz, Novakup®, but also numerous minerals.

If you would like to learn how silane treatments can improve your system’s performance, call our technical sales personnel at **501-623-8893** today!

Toll Services

Malvern Minerals has over 60+ years of experience in the minerals industry. Based on this experience in mining and processing of our unique silica, we have increased our functional capacity by offering these same processing standards to all minerals. Because of this ability, we offer the CASE industry expertise in toll: blending, packaging,

silane treating and grinding. Additionally, we offer in house logistical support. In summary, we offer:

- Silane Treatment
- Toll Grinding
- Toll Blending
- Toll Packaging



☆ Malvern Minerals Treated Products:

- Wollastokup® - *wollastonite*
- Carbokup® - *calcium carbonate*
- Klakup® - *kaolin clay*
- Titankup® - *titanium dioxide*
- Trikup® - *aluminum trihydrate*
- Monykup® - *antimony oxide*
- Bubblekup® - *microspheres*