



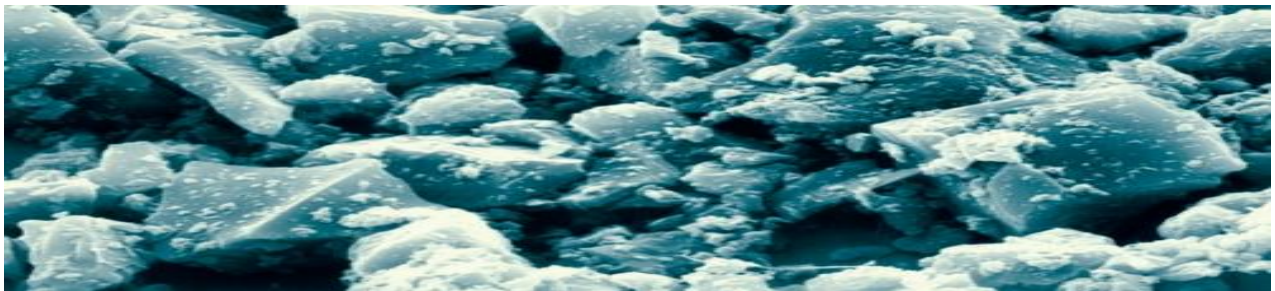
Product Data Sheet

K GLOSS SM

Polymer application

SURFACE SPECIALITY CHEMIE

SILICA POWDER AS FUNCTIONAL FILLER – K GLOSS SM



In many Industrial application regular silica powders having following limitation:

- Control moisture and air, heat treatment is required.
- Less filler loading into resin matrix or higher viscosity pick up.
- Presence of Moisture and air Hamper Curing of resin matrix.
- Low mechanical, electrical and heat properties.
- Require more man power, electric charges. Time and more process to control Moisture and air.
- Less dispersion of filler and distribution of particle into resin matrix.
- Require more air release additives.
- Mold release not very smooth, so require more release agent .

Now all the above problem can solve with our new modified products **K GLOSS -SM**

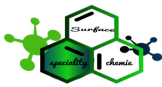
Functional Fillers

- **Hydrophobic and weather resistance**
- Used for reinforcement and typically increase modulus and strength.
- Constitute up to 70% by volume in oriented composites.
- Discontinuous systems typically do not exceed 30–40% by volume.

ADVANTAGES OF **K-GLOSS SM**



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- ENABLES HIGHER FILLER LOADING
- IMPROVES PROCESSABILITY
- IMPROVE BULK DENSITY
- IMPROVE OIL ABSORPTION
- CONTINUOUS MOISTURE CONTROL
- IMPROVES CHEMICAL RESISTANCE
- IMPROVES FILLER and pigment DISPERSION
- IMPROVES COMPOSITE STRENGTH
- IMPROVES ELECTRICAL PROPERTIES
- IMPROVES PROPERTY UNIFORMITY
- IMPROVES WET-OUT OF THE MINERAL BY THE POLYMER
- CLOSSES THE VOID BETWEEN FILLER AND POLYMER
- IMPROVES MECHANICAL PROPERTIES
- REDUCES THE VISCOSITY OF THE FILLER/POLYMER MIX
- ELIMINATES A STEP IN THE PRODUCTION PROCESS (NO NEED FOR IN-SITU)
- Reduced cost
- Increased abrasion resistance.
- Increased rigidity and impact strength.
- Reduced shrinkage and water absorption.
- Increased heat deflection temperature.
- Modified electrical and thermal properties.
- Reduced flammability.
- Reduced flexural and tensile strength.

PROPERTIES	General SILICA	K-GLOSS SM
Particle Shape	Irregular	Lamellar or platy
GE Brightness	80-92	82
Oil absorption	30-42	15-17
Hegman Fineness	0-6+	7.5+
pH (10%)	6-8	6-8
Specific Gravity	2.65	2.65
Refractive Index	1.54	1.55
Mohs Hardness	7	7
Water absorption / 100 gms pw	8.7	Zero



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Polymer application

Low Oil Absorption = Lower VOCs
Higher PVC without Higher Viscosity

Epoxy resin applications:

For decades now, epoxy resins have been an important material in electronics and electrical engineering, thanks to their excellent adhesive strength, their resistance to heat and chemicals, and their favorable electrical properties. In the electronics industry, epoxy-resin molding materials are commonly used as coating systems and lamination resins for circuitry, and as auxiliary materials for the production of circuit boards. In electrical engineering, epoxy resins are employed in the manufacture of converters, isolators, and air-cooled transformers. The mechanical, thermal and electrical specification for a given epoxy resin will be determined in large part by the particular type of functional filler to be used.

K-GLOSS SM as High Performance Fillers for epoxy-resin systems. Both products not only have exceptional mechanical characteristics, but provide a significant economic benefit as well. Silica-based, High Performance Fillers have the following important features:

- ❖ **High resistance to weather/chemicals.**
 - High mechanical strength and durability.
 - Good filling power.
 - Excellent process ability.
 - Low thermal expansion.
- ❖ **Better air release properties, so require less air release agent**
- ❖ **Better mold release effect**
- ❖ **No recoatability issue of final mold**
- ❖ **Easy dispersion of filler**
- ❖ **More filler loading into epoxy**

Other application:

- **Road marking paints – better water and abrasive resistance**
- **Rubber compounding – Reinforcement additive with high performance ,wear resistance**
- **PVC and others thermoplastic application – better electrical properties with good melt flow**
- **Composite –UPR and EPOXY – High electrical and water resistance and weather resistance with best mold finish ,high heat resistance ,wear resistance**

