



159-CS

FUNCTIONAL FILLER

PRODUCT DESCRIPTION

In many Industrial applications like coatings, epoxy putty, Adhesive 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 **159-CS**

- Functional Fillers
- Hydrophobic and whether resistance
- Used for reinforcement and typically increase modulus and strength.
- Constitute up to 60% by volume in oriented composites.
- Discontinuous systems typically do not exceed 20-30% by volume.

ADVANTAGES

- Enables higher filler loading
- Processability
- Bulk density
- Continous control
- Chemical resistance
- Filler dispersion
- Mechanical properties
- Electrical properties
- Property uniformity
- 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.

SPECIFICATION

Properties	General Silica	159-CS
Particle Shape	Shape	Shape
GE Brightness	Mat	Mat
Oil Absorption	80	80
Hegman Fineness	20	30
pH (10%)	70	80
Specific Gravity	25	35
Refractive Index	85	95
Mohs Hardness	75	59
Water absorption / 100 gms pw	55	35
Properties	PVC	PVC

Higher PVC without impact on resilience properties

APPLICATION

- Epoxy floor coatings
- Epoxy & UPR putty
- Under water putty & coatings
- Anticorrosive coating
- High scratch resistance coating
- Epoxy Ceramic coatings
- Solvent less pipe coatings
- Wood filler
- Wood sealer
- Powder coatings
- Low coat gel coat
- Epoxy wall coatings
- Heat resistance coating
- Non stick coating

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 circuitboards. 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.

159-CS 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.
- Excellent under water properties
- Excellent salt water resistance
- Better air release properties, so require less air release agent
- Better mold release effect
- No recoatability issue of final mold or coatings
- Easy dispersion of filler
- More filler loading into epoxy
- Improve sag resistance
- Better filling in porous surface
- Better sanding aid with less clarity effect

DISCLAIM

Those presented in this document, our research so far, our experience and knowledge within the information provided is accurate. In case of changes in operating conditions and methods of application, any information given in this document can not be considered as guarantees and preliminary tests are recommended. For more information and our technical team and our laboratory will provide support services.

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