

SL-450

Silicon Oxycarbide Refractory Filled Slurry



POLYMER-TO-CERAMIC™ TECHNOLOGY

Technical Data Sheet

SL-450 slurry is a vinyl substituted polysiloxane resin, heavily filled with a refractory. SL-450 cures to form a thermoset at temperatures between 180°C and 250°C and forms a dense ceramic at temperatures between 850°C, to as high as 1,100°C. SL-450 functions ideally as a high temperature surface coating, an environmental barrier coating (EBC), a substitute for polymer infiltration, and a wear barrier.

Product Highlights

- Good for wet layup prepregging of fabric or chopped fiber.
- High viscosity ideal for coating surfaces and infiltrating surfaces applied as a paste or roll-on application.
- Optimally distributed refractory to improve packing of filler and resin.
- Stable pyrolysis cycles in inert environments (nitrogen, argon) at 2°C/min to 850°C - 1,100°C.
- Stable curing cycles in air environments up to 250°C.
- Simplifies coating of fibers, fabrics, and performs.
- No solvents with virtually no odor.
- Easy clean up with standard solvents.
- Reduces densification and infiltration cycles.
- Very high mass yield through ceramic pyrolysis.
- Pyrolysis produces gray coating appearance.

Properties of SL-450 Slurry

Density	1.88 - 1.90 g/cm ³
Appearance	Gray, thick liquid or paste
Viscosity	< 10,000 cP (est)
Compatible Solvents	Hexane, Tetrahydrofuran, Toluene
Flash Point	TBD°C
Filler Type	Refractory; Proprietary Distribution
Filler Loading	<50 vol%
Polymer Type	Polyramic® SPR-212
Catalyst	None
DOT / IATA Regulations	Non Hazardous
Storage	Room Temperature*

* Refrigeration of container is recommended to extend shelf life. Periodic venting required.

Warranty

No analysis of this product is permitted. The data provided relates only to the material identified above, as supplied by Starfire Systems®, Inc. (SSI). Because conditions and methods of use of our products are beyond our control, this information should not be used as a substitution for customer's tests to ensure that SSI's products are safe, effective, and fully satisfactory for the intended end use. SSI's sole warranty is that the product will meet sales specifications in effect at the time of shipment.