

SL-480, SL-227

Silicon Oxycarbide Refractory Filled Slurry



POLYMER-TO-CERAMIC™ TECHNOLOGY

Technical Data Sheet

SL-480 and SL-227 slurry are vinyl substituted polysiloxane resins with refractory filler. Both slurries cure to form a thermoset at temperatures between 180°C and 250°C and form a dense ceramic at temperatures between 850°C, to as high as 1,100°C. Both SL-480 and SL-227 slurry function ideally as a high temperature surface coating, environmental barrier coatings (EBC), substitutes for polymer infiltration, or wear barriers.

Product Highlights

- Ideal for wet layup prepregging of fabric or chopped fiber.
- Medium viscosity ideal for coating and infiltrating surfaces, and can be applied as a wipe coating.
- 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 325°C.
- Simplifies coating of fibers, fabrics, and preforms.
- No solvents with virtually no odor.
- Easy clean up with standard solvents.
- Reduces densification and infiltration cycles.
- High mass yield through ceramic pyrolysis.
- Pyrolysis produces black and glassy appearance.

Properties of Slurries

	SL-480	SL-227
Density	1.60 – 1.65 cm ³	1.55 - 1.60 cm ³
Appearance	Gray, liquid	
Viscosity	4,000 – 5,000 cP	3,000 – 4,000 cP
Compatible Solvents	Hexane, Tetrahydrofuran, Toluene	
Flash Point	62°C	
Filler Type	Refractory; Proprietary Distribution	
Filler Loading	25 – 30 vol%	23 – 28 vol%
Polymer Type	Polyramic® SPR-212	
Catalyst	None Required, CAT-776 suggested to improve yield	
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.