

SL-1130, SL-1132

Silicon Oxycarbide Refractory Filled Slurry



POLYMER-TO-CERAMIC™ TECHNOLOGY

Technical Data Sheet

SL-1130 and SL-1132 slurries are poly-siloxane resins filled with alpha-silicon carbide refractory particulates. Both slurries cure to form a thermoset at temperatures between 180°C and 325°C and form a dense ceramic at temperatures between 850°C and 1,100°C. Polyramic® SL-1130 and SL-1132 function as molding slurries, high temperature surface coatings, substitutes for polymer infiltration, or wear barriers. SL-1130 and SL-1132 are ideal for prepregging and can be staged to create various degrees of tack depending on need and desire.

Product Highlights

- Ideal for prepregging of fabric or chopped fiber
- Simplifies coating of fibers, fabrics, and preforms
- Stable pyrolysis cycles in inert environments (nitrogen, argon) at 2°C/min to 850°C - 1,100°C.
- Medium viscosity ideal for coating and infiltrating surfaces and can be applied as a wipe coating.
- Virtually odorless without solvents.
- Pyrolysis produces black and glassy appearance.
- Stable curing cycles in air environments up to 325°C.
- Reduces densification and infiltration cycles
- Varying degrees of tack possible when thermally advancing polymer.
- Optimally distributed refractory to improve packing of filler and resin.
- Easy clean up with standard solvents
- High mass yield through ceramic pyrolysis

Properties of Slurries (typical)

	SL-1130	SL-1132
Density	1.55 – 1.65 g/cm ³	1.31 – 1.41 g/cm ³
Appearance	Brown / Tan Liquid	
Viscosity, 25C	3,500 – 7,500 cP	2,000 – 3,500 cP
Compatible Solvents	Hexane, Tetrahydrofuran, Toluene	
Flash Point	62 °C	
Filler Type	alpha silicon carbide, 1-2um particle diameter (d50)	
Filler Loading	22 - 26 vol% / 44 – 50 wt%	10 - 15 vol% / 24 – 33 wt%
Pyrolytic Yield	82 wt% (min)	76 wt% (min)
Polymer Type	Polyramic ® SPR-688	
Catalyst	None required; CAT-776 (suggested) Peroxide based catalyst	
DOT / IATA Regulations	Non-Hazardous	
Storage	Refrigerate*	

*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.