

## HS-1220 “Polysilazane Precursor Matrix” High Performance Resin System

### Introduction - Technical Data & Applications

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The HS-1220 resin is for manufacturing High Temperature composite & CMC type projects that need to take excessive heat while maintaining structural integrity and strength.

Operating service temperatures will vary dependent on the cure cycle used during the composite components creation and the fiber reinforcement used.

HS-1220 has unique advantages in that composites can be formed using; Hot Press-Forming, Compression Molding, Injection Molding or Pre-Preg processing, etc. HS-1220 may also be blended with other epoxy resin systems to create a hybrid resin that can offer elevated operating temperatures.

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HS-1220 – is a stable and easy to work with, powder resin system;

- It is easily melted for creation of Compression Formed Components
- *As well as;*
- That easily dissolves in variety of solvents, for use in creating fiber reinforcement pre-pregs; i.e.; glass, carbon, quartz, basalt, Kevlar etc.
- It can also be integrated with dry additives, such as; whiskers, graphene & graphene nano tubes, carbon nano-tubes and a host of other materials to customize the end result properties.

HS-1220 Melt properties;

- Hot Press – Product liquefies into a 1000 cps liquid at “90 to 110°C”

HS-1220 cure options;

- A 150 to 200°C “*air cure*” offers a maximum air service temp of 600°C/1112°F
- Yet when cured in an “*inert atmosphere*” a silicon oxycarbide ceramic matrix is formed, offering up to a 1221°C/2230°F, air service temperature.

The manufacturer feels that the data provided represents the product to be provided. However does not warrant or guarantee any finished product properties, as the conditions and methods of use are beyond our control. It is up to the end user to test and determine the suitability of the product for the intended use. Manufactures warranty does not extend beyond, that the product will consistently meet the standards as did the initial test materials supplied.