

## EpoxyLite® Technical Data Sheet

**Product:** EpoxyLite® TSA 220S

**Description:** Single component, clear amber, Epoxy VPI resin.

TSA 220S is a reduced viscosity version of EpoxyLite TSA 220 specifically formulated to enable processing without resin pre-heat.

**Application:** High performance VPI resin for treatment of traction motors to provide a cured insulation system which conforms to thermal class 220° C.

### Processing Characteristics:

	Resin	Hardener	Mixture	
<b>Viscosity</b>	<b>5500 500</b>	-	-	<b>mPas @ 25° C mPas @ 50° C</b>
<b>Specific Gravity</b>	<b>1.18</b>	-	-	<b>g/cm<sup>3</sup></b>
<b>Mix Ratio</b>	<b>Single component</b>			<b>p.b.w.</b>
<b>Mix Ratio</b>	<b>Single component</b>			<b>p.b.v.</b>
<b>Gelation Time</b>	<b>6 minutes</b>			<b>@ 165° C</b>
<b>Cure Schedule</b>	<b>12 hrs</b>			<b>@ 165° C</b>

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### Cured Properties:

<b>Shore D Hardness:</b>	( DIN 53505 )	<b>90 @ 25°C</b>
<b>Thermal Class:</b>	( ASTM D2307/20000hrs )	<b>200° C</b>
<b>Glass transition Temp.</b>	( IEC 1006 )	<b>143° C</b>
<b>Tensile Strength:</b>	( ISO 527 )	<b>110 N / mm<sup>2</sup></b>
<b>Elongation at Break:</b>	( ISO 527 )	<b>2.5 %</b>
<b>Thermal Coeff. of Expansion:</b>	( DIN 53752 )	<b>50.10<sup>-6</sup>K<sup>-1</sup></b>
<b>Thermal Conductivity:</b>	( ISO 8894-1 )	<b>0.23 W / mK</b>
<b>UL Recognition:</b>		<b>-</b>
<b>Water Absorption:</b>	( ISO 62 )	<b>0.12 % @ 23°C</b>
<b>Dielectric Strength:</b>	( IEC 243-1 )	<b>200 kV / cm</b>
<b>Dielectric Constant:</b>	( IEC 250 )	<b>3.60 20° C</b>
<b>Dissipation Factor:</b>	( IEC 250 )	<b>0.003 20° C</b>
<b>Volume Resistivity:</b>	( IEC 93 )	<b>&gt; 10<sup>13</sup> ohm / cm</b>
<b>Comparative Tracking Index:</b>	( IEC 112 )	<b>&gt; 550 Volts</b>

**Storage:** Minimum storage life 12 months in tightly closed containers at temperatures below 25°C.

**Handling:** Refer Material Safety Data Sheet.

**Issue:** 24/02/2005

This information is based on test results believed to be accurate and reliable. Nothing herein however, is considered a warranty, either expressed or implied regarding the application and performance of EpoxyLite materials, since the conditions of use are beyond our control.