

CYCOM® PR 520 RTM

Epoxy; Epoxide

Cytec Industries Inc.

Message:

CYCOM® PR 520 RTM is a one-part, 180°C (355°F) curing epoxy resin system offering superior damage tolerance and good strain to failure required for composite primary structure applications. The value of resin infusion is the ability to design complex geometric parts while leveraging a unitized structure which ultimately leads to a reduction in weight, lower part counts and the elimination of many post-manufacturing processes. CYCOM PR 520 RTM is an off-white thick paste at room temperature reducing to a low viscosity when heated for injection. The resin has a low enough viscosity to allow injection at 90 - 100°C (194 - 212°F). Following injection, the resin viscosity decreases with increasing tool temperature to below 50 cP, thus helping to ensure full fiber wetting. CYCOM PR 520 RTM resin is fully cured following a 2-hour dwell at 180°C (355°F) after which it has a continuous hot/wet service temperature of 104°C (220°F). For reinforcement preforming operations, a fully compatible binder system, CYCOM® 7720 RTM, and a low areal weight film, PR 520-1, have been developed for use with CYCOM PR 520 RTM. The binder and low areal weight film are available pre-coated onto fabrics of the customer's choice. A separate datasheet for CYCOM 7720 RTM is available upon request.

Suggested Applications:

Engine Blades

Engine Blade Spacers/Platforms

Containment Cases

Outer Guide Vanes

Hinge/Brackets/Fittings

General Information		
Features	Good Toughness	
	Heat Cure	
	Low Moisture Absorption	
Uses	Aerospace Applications	
	Fittings	
	Housings	
	Structural Parts	
Forms	Paste	
Physical	Nominal Value	Unit
Specific Gravity ¹	1.25	g/cm ³
Mechanical	Nominal Value	Unit
Tensile Modulus ² (24°C)	4000	MPa
Tensile Strength ³ (24°C)	82.0	MPa
Tensile Elongation ⁴ (Break)	3.0	%
Flexural Modulus ⁵	3450	MPa
Flexural Strength ⁶	153	MPa
Compressive Strength ⁷ (24°C)	128	MPa
Shear Modulus ⁸	827	MPa
Shear Strength ⁹ (24°C)	61.4	MPa
Thermal	Nominal Value	Unit
Glass Transition Temperature ¹⁰	161	°C
NOTE		

1.	Neat Resin
2.	Neat Resin
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