

## Master Bond Supreme 10HTCL Epoxy for Cryogenic Applications

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy Adhesive

### Material Notes:

**Description:** Master Bond Supreme 10HTCL features a blend of performance properties including both high shear and peel strengths along with convenient handling. This one component system is formulated to cure at elevated temperatures, e.g. 60-75 minutes at 250°F, shorter times can be achieved at higher temperatures. Tensile shear strengths of 3,500 psi and T-peel strengths of over 30 pli are readily obtained. Supreme 10HTCL has a number of processing advantages; no mixing is necessary prior to use, the viscosity remains constant with time (i.e. it will not thicken over time), the working life is unlimited at room temperature, and the material is room temperature storable. It is cryogenically serviceable and has a wide temperature range of 4K to +400°F. Master Bond Supreme 10HTCL readily withstands severe thermal cycling along with mechanical shock and vibration. It is very resistant to many chemicals including water, oils, fuels, solvents, acids and bases. It has excellent adhesion to metals, glass, ceramics and many plastics. The cured epoxy is a superior electrical insulator. Its natural color is amber, but other colors are available. Supreme 10HTCL has a higher viscosity but flows nicely and can be easily applied to substrates. Supreme 10HTCL's high performance properties coupled with its convenient handling make it widely used in a variety of applications in the aerospace, electronic, electrical, computer, metalworking, appliance, automotive and chemical industries. Product Advantages: Single component system; no mixing needed prior to use, no viscosity changes over time. Room temperature storable. Versatile cure schedules; 60-75 minutes at 250°F; 35-40 minutes at 300°F. High shear and peel strengths to a wide variety of similar and dissimilar substrates. Service temperature range of 4K to +400°F. Good electrical insulating properties and chemical resistance. Superior thermal cycling ability; resistance to mechanical and thermal shocks. Excellent flow properties. 100% reactive; contains no solvents or diluents. Information provided by MasterBond®

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Master-Bond-Supreme-10HTCL-Epoxy-for-Cryogenic-Applications.php](http://www.lookpolymers.com/polymer_Master-Bond-Supreme-10HTCL-Epoxy-for-Cryogenic-Applications.php)

Physical Properties	Metric	English	Comments
Viscosity	140000 - 200000 cP	140000 - 200000 cP	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	>= 70	>= 70	
Tensile Strength at Break	>= 65.5 MPa	>= 9500 psi	
Elongation at Break	>= 5.0 %	>= 5.0 %	
Tensile Modulus	>= 2.76 GPa	>= 400 ksi	
Compressive Strength	>= 62.1 MPa	>= 9000 psi	
Shear Strength	>= 24.1 MPa	>= 3500 psi	Tensile, Al to Al
Peel Strength	4.38 - 5.26 kN/m	25.0 - 30.0 pli	T-peel

Thermal Properties	Metric	English	Comments
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Maximum Service Temperature, Air Thermal Properties	204 °C Metric	400 °F English	Comments
Minimum Service Temperature, Air	-168 °C	-270 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	35.000 - 40.000 min	0.58333 - 0.66666 hour	
	@Temperature 149 °C	@Temperature 300 °F	
	60.0 - 75.0 min	1.00 - 1.25 hour	
	@Temperature 121 °C	@Temperature 250 °F	
Shelf Life	3.00 - 6.00 Month	3.00 - 6.00 Month	in original unopened containers
	@Temperature 23.9 °C	@Temperature 75.0 °F	

## Contact Songhan Plastic Technology Co.,Ltd.

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