

## Master Bond EP21TDC-2ND Two component, highly flexibilized, non-drip epoxy resin compound

Category : Polymer , Thermoset , Epoxy , Epoxy Encapsulant, Unreinforced

### Material Notes:

**Product Description:** Master Bond EP21TDC-2ND is a two component highly flexible epoxy resin system for high performance bonding, sealing and coating with a non-drip consistency. It has a forgiving one to three mix ratio by weight. The system is formulated to cure fully at ambient temperature or more quickly at elevated temperatures. The optimum cure schedule is overnight at room temperature followed by 2-3 hours at 150-200°F. An unusual feature here is that the curing cycle can affect the hardness of the system. If cured only at elevated temperatures, the Shore A hardness is 50-55. If cured with the optimum cure schedule, the Shore A is 75-80. It has very high peel strength and elongation. EP21TDC-2ND develops very little exotherm while curing, making it well suited for sealing or encapsulating in thicker sections. It has excellent adhesion to a wide array of substrates including metals, composites, glass, ceramics and many rubbers and plastics. Its flexibility allows EP21TDC-2ND to have excellent thermal cycling properties along with exceptional resistance to thermal and mechanical shock and vibration. This epoxy is a superb electrical and thermal insulator with good resistance to chemicals such as water, oils, hydraulic fluids, bases and salts. EP21TDC-2ND is cryogenically serviceable and has a temperature range of 4K to +250°F. EP21TDC-2ND is widely used in aerospace, specialty OEM, optical and especially applications where robust thermal cycling properties and shock resistance are paramount. **Product Advantages:** Easy application: paste-like consistency; non-drip Cures readily at ambient temperature or faster at elevated temperatures Variable hardness and flexibility depending upon cure schedule Bonds well to a wide variety of substrates Excellent peel strength, dependable resistance to rigorous thermal cycling Cryogenic serviceability Information provided by MasterBond®

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Master-Bond-EP21TDC-2ND-Two-component-highly-flexibilized-non-drip-epoxy-resin-compound.php](http://www.lookpolymers.com/polymer_Master-Bond-EP21TDC-2ND-Two-component-highly-flexibilized-non-drip-epoxy-resin-compound.php)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50 - 55	50 - 55	cured at 150-200°F
	75 - 80	75 - 80	cured with optimum schedule
Tensile Strength at Break	>= 34.5 MPa	>= 5000 psi	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Elongation at Break	<= 120 %	<= 120 %	
Shear Strength	>= 8.27 MPa	>= 1200 psi	Al/Al, Tensile lap
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Peel Strength	>= 5.26 kN/m	>= 30.0 pli	T-peel

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	121 °C	250 °F	
Minimum Service Temperature, Air	-269 °C	-452 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{14}$ ohm-cm	$\geq 1.00 \times 10^{14}$ ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	120 - 180 min	2.00 - 3.00 hour	
	@Temperature 93.3 °C	@Temperature 200 °F	
	720 min	12.0 hour	Followed by 2-3 hours at 150-200°F (Optimum Cure Schedule)
	@Temperature 23.9 °C	@Temperature 75.0 °F	
	2880 - 4320 min	48.0 - 72.0 hour	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Pot Life	$\geq 60$ min	$\geq 60$ min	100 gram mass
Shelf Life	12.0 Month	12.0 Month	in original unopened containers
	@Temperature 23.9 °C	@Temperature 75.0 °F	

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	1:3	by weight

## Contact Songhan Plastic Technology Co.,Ltd.

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