



10-3003 EPOXY ADHESIVE

DESCRIPTION:

10-3003 is a high bond strength epoxy adhesive formulated for ease in handling and convenience for the end user. This system has a non-critical mix ratio and adjustable flexibility. 10-3003 is also very safe to use due to the absence of harmful solvents and toxic chemicals in the formulation.

10-3003 yields high peel strength and excellent tensile strength. It also has outstanding thermal shock, impact and vibration resistance. This high performance epoxy adhesive exhibits outstanding physical, thermal, and electrical insulation properties.

Related Products: 10-3004 NC is a very low viscosity version of 10-3003. 10-3002 is available as a higher viscosity version of 10-3003.

FEATURES:

- Non-critical mix ratio
- Ability to adjust flexibility of bond line
- Outstanding thermal shock resistance
- Excellent chemical resistance
- Very good operating temperature range

TYPICAL PROPERTIES:

Viscosity at 25 °C, cps	
10-3003RCL/10-3003RBK Resin	12,000 - 15,000
10-3003CCL Hardener	6,000
10-3003 Mixed	15,000
Available Colors	Clear, Black
Operating Temperature Range, °C	-50 to +125
Pot Life, 100 gram mass, 25 °C	90 Minutes
Specific Gravity, 25 °C	
10-3003RCL/10-3003RBK Resin	1.17
10-3003CCL Catalyst	0.96
Flexural Strength, psi	51,000
Izod Impact, ft-lb/in	4.0
Tensile Strength, psi	10,500
Coefficient of Thermal Expansion, ppm/°C	50
Thermal Conductivity, W/m-K	0.43
Thermal Shock, MIL I 16923	Passes
Dielectric Strength V/mil	550
Volume Resistivity, ohm-cm	1.1 x 10 ¹⁵
Dielectric Constant 10 ³ cycles	3.11
Dissipation Factor 10 ³ cycles	0.02
BOND STRENGTH:	
Steel to Steel	3,000 psi
Aluminum to Aluminum	3,300 psi
Copper to Copper	1,500 psi

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Glass to Glass	**
Nylon to Nylon	1,200 psi
PVC to PVC	750 psi
Natural Rubber to Natural Rubber	**
Brass to Brass	2,600 psi
Natural Rubber to Aluminum	**
Teflon* to Aluminum	1,850 psi

**Substrate fails before bond failure
*Teflon-Registered Trademark of E.I. Dupont

RESIN/HARDENER:

1. Rigid formulation	100/50
2. Semi-rigid formulation	100/100
3. Flexible formulation	100/150

For the majority of bonding applications, formulation #2 is used.

INSTRUCTIONS FOR USE:

1. By weight mix according to one of the ratios above for desired rigidity.
2. Degas, pour, and cure according to one of the following cure schedules:
 - a) 25 °C 24 hours
 - b) 65 °C 60 minutes
 - c) 105 °C 20 minutes

PREPARATION OF SURFACES:

Surfaces must be clean and grease free. Adhesion can be substantially increased by abrading the surfaces to be bonded with emery cloth, sand paper, carbide grinding tools, and sand blasting. A roughened, porous surface will produce the best results. Any oxidized metal films should be removed just prior to application of the epoxy adhesive mixture.

STORAGE & HANDLING:

Store both components at 25 °C in original containers. The expected shelf life is 12 months. Please read the Safety Data Sheet before using this or any other chemical.

AVAILABILITY:

This product is available in the convenient TriggerBond® dual barrel cartridges (50ml, 200ml & 400ml) and in quarts and gallons.

IMPORTANT:

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