



# 10-3003 NS NON-SAG EPOXY ADHESIVE

## DESCRIPTION:

10-3003 NS is a new 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 NS is also very safe to use due to the absence of harmful solvents and toxic chemicals in the formulation.

10-3003 NS 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.

## FEATURES:

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

## TYPICAL SPECIFICATIONS:

### PHYSICAL:

Color	Clear
Pot Life, 100 gram mass @ 25°C	45 minutes
Specific Gravity, 25°C/25°C	1.24
Resin	1.15
Catalyst	.98
Tensile Strength, psi	10,500
Flexural Strength, psi	51,000
Expansion Coefficient /°C	50 x 10 <sup>-6</sup>
Izod Impact, ft-lb/in	4.0
Viscosity at 25 °C	
10-3003 NS RESIN	65,000 cP min.
10-3003 NS Catalyst	45,000 cP min
10-3003 NS MIXED	55,000 cP min.

### THERMAL:

Thermal Conductivity, btu-in/hr-ft <sup>2</sup> -°F	3.0
Thermal Shock, MIL I 16923	PASSES

### ELECTRICAL:

Dielectric Strength V/mil	550
Volume Resistivity, ohm-cm	1.1 x 10 <sup>15</sup>
Dielectric Constant 103 cycles	3.11
Dissipation Factor 103 cycles	0.02



**BOND STRENGTH:**

Steel to Steel	3,000 psi
Aluminum to Aluminum	3,300 psi
Copper to Copper	,500 psi
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

**MIX RATIO:**

10-3003 NS offers adjustable mix ratios in order to obtain a rigid, semi rigid, or flexible bond line.

**RESIN/HARDENER; BY WEIGHT:**

- |                           |         |
|---------------------------|---------|
| 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.

**CURE SCHEDULE:**

1. 24 hours at room temperature
2. ½-1 hour at 150-160°F
3. 15-30 minutes at 200-220°F

**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, sand blasting, etc... 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, AND AVAILABILITY:**

Store in a cool, dry place in original containers. Keep containers closed and stir well before using. Expected shelf life is 1 year in original unopened containers.

10-3003 NS is available in the TriggerBond® Systems: 50ML, 200ML, and 400ML Dual Barrel Cartridges. This product is also available in quarts, gallons, 5-gallon pails and 55-gallon drums.

**IMPORTANT:**

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