



# 10-3003 NS NON-SAG EPOXY ADHESIVE

## DESCRIPTION:

10-3003 NS 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 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:

Viscosity at 25°C	
10-3003NS Resin	65,000 cP min.
10-3003 NS Catalyst	45,000 cP min.
10-3003 NS MIXED	55,000 cP min.
Color	Clear, Black
Pot Life, 100-gram mass at 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

### 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. 30-60 minutes at 65-70°C
3. 15-30 minutes at 95-105°C

**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, sandpaper, 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, 75mL, and 400mL Dual Barrel Cartridges. This product is also available in quarts, gallons, and 5-gallon pails.

**IMPORTANT:**

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