EPOXIES
INNOVATIVE BONDING SOLUTIONS ETC.

TECHNICAL BULLETIN

# 10-3009 NC
# EPOXY ADHESIVE & POTTING COMPOUND

## DESCRIPTION:
10-3009 NC is a low viscosity epoxy adhesive and potting compound. It is easy to use and allows the end user to adjust the flexibility of the cured epoxy. This product offers a good combination of peel and tensile strength. 10-3009 NC provides electrical insulation and outstanding adhesion.

## FEATURES:
- Noncritical mix ratio
- Outstanding thermal shock resistance
- Excellent chemical resistance

## TYPICAL SPECIFICATIONS:

| | |
|---|---|
| Viscosity, 25°C; cps | |
| Resin | 800 |
| Catalyst | 2,000 |
| Mixed | 1000 |
| Color | Clear |
| Gel time, 100 grams, 25°C | 25 minutes |
| Operating Temperature Range, °C | -50 to +150 |
| Specific Gravity, 25°C | |
| 10-3009NC Resin | 1.17 |
| 10-3009NC Catalyst | 0.96 |
| Tensile Strength, psi | 10,500 |
| Dielectric Strength V/mil | 550 |
| Dielectric Constant $10^3$ cycles | 3.11 |
| Dissipation Factor $10^3$ cycles | 0.02 |
| Volume Resistivity, ohm-cm | 1.1 x 1015 |
| Expansion Coefficient, ppm/°C | 50 |
| Izod Impact, ft-lb/in | 4.0 |
| Thermal Conductivity, W/m·K | 43 |
| Thermal Shock, MIL I 16923 | Passes |
| Flexural Strength, psi | 51,000 |

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## TYPICAL BOND STRENGTH:

While complete chemical curing of the adhesive may take several days, bond strengths are reached quickly. Generally, most substrates reach one half of their final bond strength in 3 hours or less.

| | |
|---|---|
| Steel | 3,000 psi |
| Aluminum | 3,300 psi |
| Copper | 1,500 psi |
| Glass | ** |
| Nylon | 1,200 psi |
| Polyvinylchloride | 750 psi |
| Natural Rubber | ** |
| Brass | 2,600 psi |
| Natural Rubber to Aluminum | ** |
| Teflon*to Aluminum | 1,850 psi |

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

## MIX RATIO RESIN/HARDENER:

10-3009 NC adhesives offer adjustable mix ratios to obtain a rigid, semi rigid, or flexible bond line.

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

For most bonding applications, formulation #2 is used.

## INSTRUCTIONS FOR USE:

Cure according to one of the following recommended cure schedules

| | |
|---|---|
| a) 25°C | 24 Hours |
| b) 65°C | 30 to 60 minutes |
| c) 105°C | 15 to 30 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, 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.

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