

N4000-6

High Tg Multifunctional Epoxy Laminate & Prepreg



The Nelco® N4000-6 high Tg multifunctional epoxy series of materials was specifically designed to withstand all varieties and combinations of thermal excursions or PCB rework operations. It exhibits outstanding performance through hot air soldering, hot oil fusing, IR fusing, IR soldering, wave soldering, vapor phasing and thermal shock testing. N4000-6 is used in demanding applications such as high layer count backplanes and high density interconnects.

what you need...
when you need it...
where you need it...

PARK  **nelco**

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The versatility of the N4000-6 series combined with a high Tg, low Z-axis expansion and improved thermal, mechanical and chemical properties leads to higher yields through fabrication and assembly.

Key applications for this material include backplanes, fine line multilayers, surface mount multilayers and direct chip attach. It is also a terrific match for BGA multilayers, PCMCIA, MCM-Ls, automotive, underhood automotive and wireless communications.

The N4000-6 has been a proven performer in many applications. It can withstand multiple solder shocks and has passed the stringent Q1000 requirement of thermal cycling for 1000 hours at -40°C to 125 °C. N4000-6 provides a wide rheology window for multilayer processing and has good drilling properties, especially in high layer count designs.

The N4000-6 is vacuum laminated and available in a wide variety of constructions, copper weights and glass styles to meet the changing demands of today's PCB market. It is also available in standard copper, double treat, RTFOIL® Laminate and BC 2000™ formats

When your applications require a high performance multifunctional epoxy, the N4000-6 series of laminates and prepregs is a one stop solution.

BC 2000™ is a trademark of the Hadco Corporation
RTFOIL® is a trademark of Park/Nelco.

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Product Application Environments

| | |
|---------------------------|---|
| Fine Line Multilayers | ◆ |
| Backplanes | ◆ |
| Surface Mount Multilayers | ◆ |
| BGA Multilayers | ✓ |
| PCMCIA | ✓ |
| MCM-Ls | ✓ |
| Direct Chip Attach | ◆ |
| Automotive | ◆ |
| Underhood Automotive | ◆ |
| Wireless Communications | ✓ |

- ✓ suitable for application
◆ exceptional for application

Key Engineering Values

| | |
|---|---------|
| X/Y CTE (ppm/°C)[-40 to 125°C] | 10 - 14 |
| Z Axis Expansion (%) [50 to 260°C] | 3.7 |
| Tg by DSC (°C)* | 180 |
| Dielectric Constant (50% resin content) | |
| @ 1 MHz | 4.4 |
| @ 1 GHz | 4.1 |
| Dissipation Factor (50% resin content) | |
| @ 1 MHz | 0.023 |
| @ 1 GHz | TBD |

* Typical on laminates.

Vacuum Lamination Parameters

| | |
|--------------------------|---------------|
| Full Cure In Press (°F) | 90 min. @ 360 |
| Heat Up Rate (°F/min.) | 8 -12 |
| Critical Range (°F) | 150 - 250 |
| Cool Down Rate (°F/min.) | < 5 |
| Pressure (psi) | 200 - 300 |

Set platen 5-10° F higher than cure temp. & control heat up rate through critical temperature range.

Partial cure in press is not recommended for this product.

For More Information Contact One Of Our ISO 9002 Facilities or visit us at www.parknelco.com

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|------------------|---------------|----------------|----------------------|-----------|-------------------|
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