N4000-6

High-T_g Multifunctional Epoxy Laminate & Prepreg

The Park/Nelco N4000-6 high-T_g 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 copper, 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.

Product Application Environments

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

Key Engineering Values

X/Y CTE (ppm/°C)[-40 to 125°C]	12 - 16
Z Axis Expansion (%) [50 to 260°C]	3.9
T_g by DSC (°C)*	175
Dielectric Constant (50% resin content)	
@ 1 MHz	4.3
@ 1 GHz	4.1
@ 2.5 GHz	4.0
Dissipation Factor (50% resin content)	
@ 1 MHz	0.027
@ 2.5 GHz	0.022

* Typical on laminates.

Vacuum Lamination Parameters

Full Cure In Press	90 min. @ 182 °C
Heat Up Rate (°C/min.)	4 - 7
Critical Range (°C)	65 - 120
Cool Down Rate (°C/min.)	< 3
Pressure (kg/cm²)/(psi)	15 - 20/200 - 300

Set platen 3 - 5° C 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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Rev C 2-02