

GORE™ SPEEDBOARD® C PREPREG DATA SHEET

SPEEDBOARD C Prepreg—the lowest loss, lowest Dk thermoset prepreg compatible with all commercial laminates. This product exhibits controlled X-Y resin flow for superior performance in cavity designs. The material consists of standard BT resin in a continuous toughening matrix.

Product Attributes

Electrical

- Low loss for high speed signal integrity
- Low Dk provides faster signal speeds
- Stable Dk (2.6) and loss (0.004) from 1 MHz–40 GHz
- Wider traces for higher bandwidth
- Superior thickness uniformity for controlled impedance layers
- Reduced crosstalk with increased routability

Reliability

- High Tg for Pb-free multiple laminations or solder reflows
- Micro reinforced for superior crack resistance
- Excellent adhesion to all commercial cores
- Compatible with Omega-ply
- Low outgassing for space applications

Processing

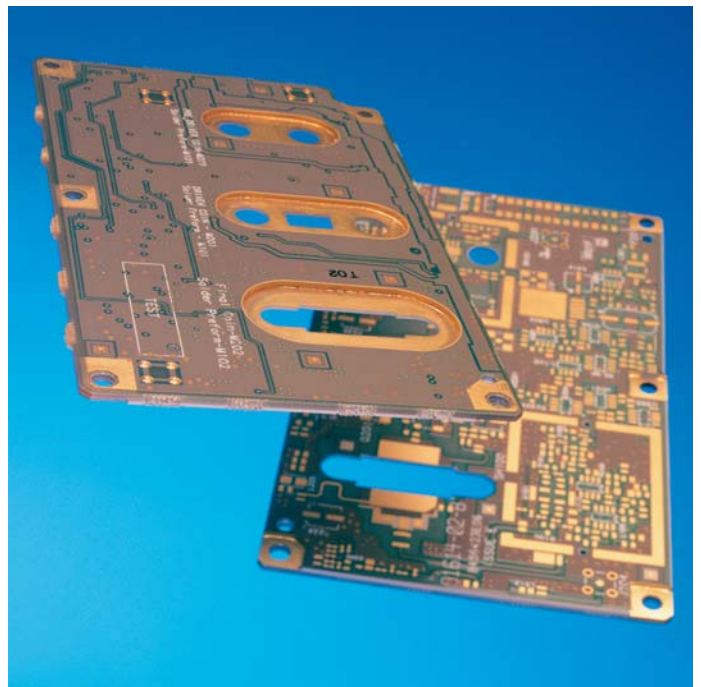
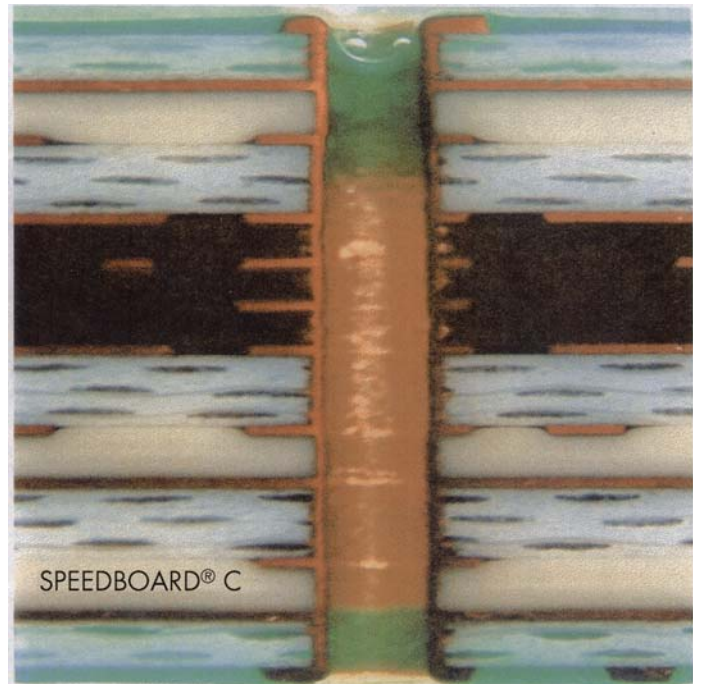
- Controlled X-Y resin flow for cavity designs
- Fills buried vias during lamination
- Standard high Tg FR4 lamination cycle
- Laser drilling 2–5x faster than glass prepregs

High Density

- Thinner boards for high layer count PCBs and improved PTH aspect ratios
- Minimizes trace “print-through”
- Excellent choice for high frequency outerlayers

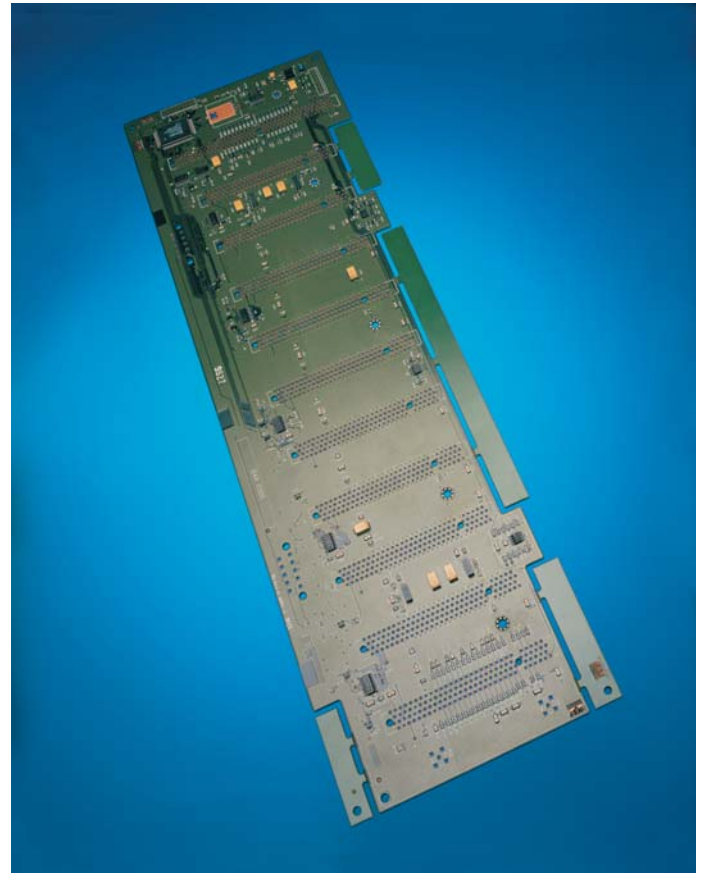
Typical Applications

- Base station power amplifiers and other cavity PCBs
- High-speed digital backplanes, routers, and servers
- RF and microwave boards
- High-speed test PCBs



Material Properties

Property	Unit	Test Condition	Typical Value
Dielectric constant (Dk)	—	Split post resonant cavity (1 MHz–40 GHz)	2.6
Loss tangent (Df)	—	Split post resonant cavity (1 MHz–40 GHz)	0.004
Peel strength	Kg/cm (pli)	17 μ m (1/2 oz) VLP foil	1.0
Solder resistance	—	288°C; 6x30 sec	Pass
CTE (X, Y, Z)	ppm/°C	TMA (–55 to +200°C)	56
Glass transition temperature	°C (°F)	TMA	220 (428)
Thickness	μ m (mil)		38, 51, 57, 86 (1.5, 2.0, 2.2, 3.4)



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