

# DATASHEET

## NTP-2 Medium Pitch Anisotropic Conductive Film (ACF)

**btechcorp** has invented and patented a process for aligning high density fibers through the thickness of a polymer matrix... up to 20 million fibers per square inch.

High conductivity metallic fibers provide a continuous path through the thickness of the film, thus avoiding the particle-to-particle contact problem of filled adhesives.

**NTP-2** Medium Pitch Anisotropic Conductive Film (ACF) adhesive is currently being qualified for a variety of applications, including:

- solar panel Z-axis interconnect
- low cost microwave PCBs
- large area lead-free solder
- component-to-substrate Z-axis assembly lamination

### NTP-2 Properties

Electrical Resistance	Z-axis: 0 microhms (1.0 cm <sup>2</sup> , 100μ thick) X-Y plane: >20 megaohm
Z-Axis Connection Density	200μ pitch
Z-Axis Thermal Resistance	<0.20 °C-cm <sup>2</sup> /W (100μ thick bond)
Coefficient of Thermal Expansion	Z-Axis: 15 ppm/°C X-Y plane: 45ppm/°C
Young's Modulus	<10 Ksi (0.06 GPa)
Ionic Purity	Hydrolyzable Chloride <5 ppm Hydrolyzable Sodium <2ppm
Operating Temperature	4°K to 90°C

### Processing

**Product Form** Film pre-form for reel supply. 2-8 mils (0.05-0.20mm) thick, +/- 0.1 mil

**Cure Cycle** 50 psi bond compression (<3 sec) at 150 °C (resin temperature)

**Storage Life** 6 months at 27 °C (80 °F)



**MH&W International Corp.**

575 Corporate Drive  
Mahwah, NJ 07430-2330

Tel: (201) 891-8800  
Fax: (201) 891-0625

**THERMAL PRODUCTS DIVISION**

Email: [thermal@mhw-intl.com](mailto:thermal@mhw-intl.com)  
Internet: <http://www.mhw-thermal.com>

09/13