

The **PB2000** series is a chemically modified form of PFA/PTFE resin that combines many of the benefits of the parent resin with several new ones. The additional benefits may include enhanced purity, improved thermal stability while processing and chemical inertness. The enhanced purity of the **PB2000** materials makes them suitable for applications that require improved color, lower extractable fluorides, and freedom from other foreign materials. Examples are in semiconductor manufacture, fluid handling systems for industry or life sciences, and instrumentation for precise measurements of fluid systems.

KEY MATERIAL ADVANTAGES:

- Excellent chemical inertness
- Enhanced purity- ideal for semiconductor applications where purity is extremely critical
- Wide operating temperature range from minus -350°F to 500° F
- Able to withstand hostile chemical environments
- Resists weather-related degradation while remaining inert
- Exceptional dielectric properties
- Low coefficient of friction

APPLICATIONS:

- Chemical pipe linings
- Valves, pipes and fittings used in chemical processing industries
- Semiconductor
- Fluid handling components for high performance chemical delivery system where purity in the parts per billion are needed



PFA TYPICAL PROPERTY RESULTS:

	UNITS	ASTM TEST	DUPONT® 450 HP PB2000	3M DYNEON PFA 6502 UHP PB2001
Tensile Strength @ 23° c	Mpa (PSI)	ASTM-D-3307	28(4,000 psi)	30(4,350 psi)
Flexural Modulus @ 23° c	Mpa (PSI)	ASTM-D-790	625 (90,000)	550 (80,000)
Izod Impact (notched)	FT-LBS./IN.	ASTM-D-256	NO BREAK	NO BREAK
Dielectric Strength (constant)	1 MHz (10 ⁶ Hz)	ASTM-D-150	2.03	N/A
Max. continuous service temp in air	C°	—	500° F	500° F
Water Absorption (immersion for 24 hours)	%	ASTM-D-570	<0.03%	<0.03%
Flammability classification †	—	UL 94	V-0	V-0
Volume Resistivity	ohm/cm	ASTM-D-257	> 10 ¹⁸	> 10 ¹⁸
Specific gravity	—	ASTM-D-792	2.15	2.15

† Results are based on based on laboratory tests under controlled conditions and do not reflect performance under real fire conditions, current rating is a typical theoretical