



MATERIAL COMPARISON GUIDE

Compare key high temperature materials at a glance

Property	PTFE	PI (Polyimide)	PET	PPS	PEN	Silicone	Mica	Ceramic Fiber	Aerogel
Continuous Temperature	260°C	260~300°C	150°C	220°C	180°C	250°C	800°C	1260°C	650°C
Peak Temperature	300°C	400°C	180°C	240°C	200°C	300°C	1000°C	1400°C	800°C
Electrical Insulation	★★★★★	★★★★★	★★★★☆	★★★★★	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★
Chemical Resistance	★★★★★	★★★★☆	★★★☆☆	★★★★★	★★★★☆	★★★★☆	★★★★★	★★★★★	★★★★★
Flexibility	★★★★★	★★★★☆	★★★★★	★★★☆☆	★★★★☆	★★★★★	★★★☆☆	★★★☆☆	★★★☆☆
Flame Resistance	★★★★★	★★★★★	★★★★☆	★★★★★	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★
Mechanical Strength	★★★☆☆	★★★★☆	★★★☆☆	★★★★☆	★★★☆☆	★★★☆☆	★★★☆☆	★★★☆☆	★★★☆☆
Typical Applications	PCB Lamination, Semiconductor, Chemical Equipment	SMT, Flexible PCB, Electrical Insulation	Electrical Insulation, Label, Masking	Battery Module, Automotive, Industrial Insulation	Solar PV, Power Electronics, Insulation	Thermal Pad, Gaskets, Cushioning, Sealing	Heating Equipment, Electrical Insulation	Industrial Furnace, High-temp Insulation	Battery Fire Protection, Thermal Insulation



QUICK TIPS



Need excellent
chemical
resistance?
Choose PTFE.



Need flexible
electrical
insulation?
Choose PI.



Need high
mechanical
strength and
battery safety?
Choose PPS.



Need fire
protection and
thermal barrier?
**Choose Aerogel
or Mica.**



Need ultra-high
temperature
resistance?
**Choose Ceramic
Fiber.**



IMPORTANT NOTE

The data above are typical values for reference only. Actual performance may vary depending on material grade, processing method, thickness and service environment. Please test before final selection.



Need help selecting the right material?
Contact our engineering team for free
material recommendations.



Contact Us