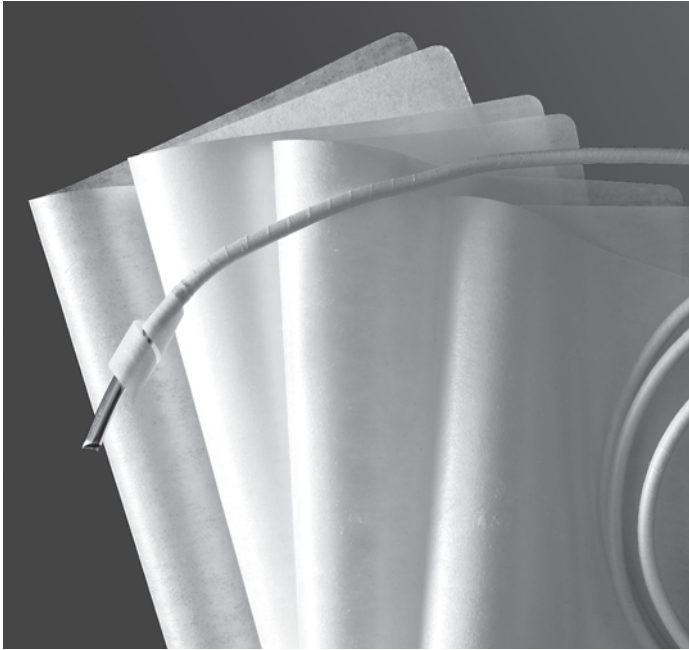


INTRODUCING ...

Thermal Shield™ Insulation Paper

- Major Features and Benefits**
- **UL Systems Recognition* - Class 220(R)**
 - **Excellent Chemical Resistance**
 - **Low Moisture Absorption**
 - **Cost Effective**
 - **Thicknesses: 2 mils (.05mm) to 7 mils (.18mm)**
- *All electrical insulation systems testing per UL 1446 and IEC 61857



DESCRIPTION

Thermal Shield™ non-woven PPS paper is designed for use in applications requiring long-term exposure to high temperatures or resistance to chemicals including oils, solvents, and most acids and bases. *Thermal Shield* is not susceptible to hydrolysis and can be used in a variety of applications without drying. *Thermal Shield* may be laminated to polyester film or resin-coated to enhance its performance.

Available in widths up to 65". Customized basis weights and thicknesses are available to meet specifications for unique applications.

Thermal Shield™ is manufactured for IPT by Powell, LLC.

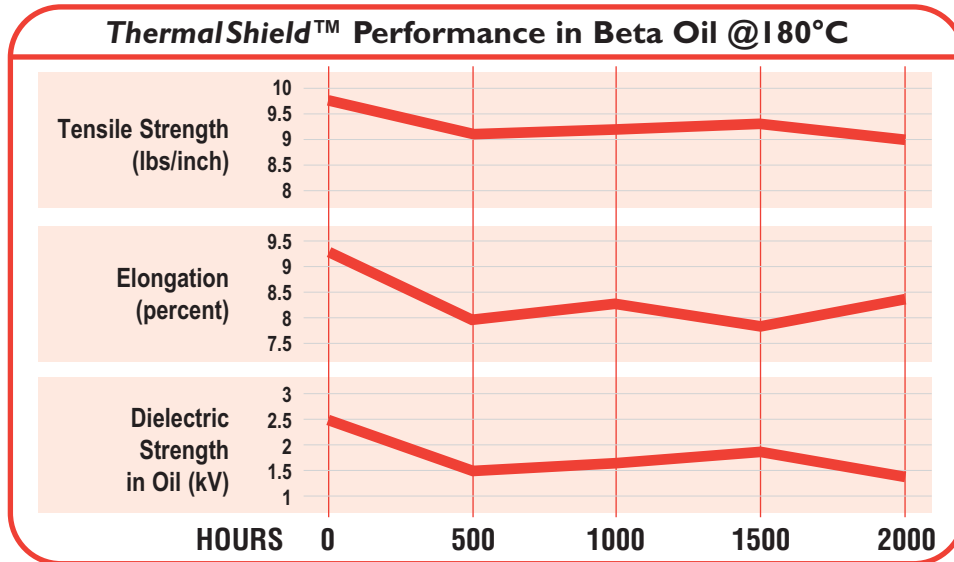
APPLICATIONS

- Layer insulation for resin-encapsulated coils
- Wire-Wrap for dry-type and liquid-immersed units
- Loudspeaker voice coils
- Pressure sensitive tapes

ThermalShield™ Typical Product Properties						
Nominal Thickness	mils (mm)	2 (.05)	3 (.08)	4 (.10)	5 (.13)	7 (.18)
Basis Weight	g/m²	44	62	80	95	112
	lb/SY	0.08	0.11	0.15	0.18	0.2
Tensile Strength, MD	kN/m	1.6	2.8	4.4	4.9	6.0
	lb/inch	9	16	25	28	34
Elongation, MD	%, min	8	9	10	12	14
Dielectric Strength	V	350	450	500	600	700

The data presented here are typical average values and are not to be used for specification purposes. No warranty is given or implied. It is the responsibility of the user to determine the material's suitability for use.

Thermal Shield™ Data Sheet



ThermalShield™ is compatible with oils commonly used in liquid-immersed electrical equipment and resists degradation at the elevated temperatures that may occur during overload conditions. Note that under long-term exposure in Beta oil at 180°C, 2mil *ThermalShield* retains its mechanical and dielectric properties. *ThermalShield* displays the same high temperature performance in mineral oil, silicone oil, and EnviroTemp FR-3.

ENVIRONMENTAL SAFETY AND HEALTH

ThermalShield™ meets all current OSHA requirements for health and safety with normal handling and good work practices. *ThermalShield™* falls within the threshold limit values for chemical substances in the work environment as specified by the American Conference of Governmental Industrial Hygienists. A Material Safety Data Sheet is available upon request. Waste should be disposed of in accordance with local landfill requirements.

ThermalShield™ will generate products of combustion. Since these products will vary with every oven or condition, the health and safety of the worker should be assured by monitoring the work site for any toxic products of combustion.

PRODUCT WARRANTY

IPT products are warranted free from defects in materials and workmanship. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The sole and exclusive remedy against IPT for breach of its limited product warranty shall be at the option of IPT; either refund of the invoice value of defective products, or repair or replacement F.O.B. its plant or other shipping point.

IN NO EVENT SHALL IPT BE LIABLE TO ANY BUYER OR ANY THIRD PARTY FOR SPECIAL, INCIDENTAL AND/OR CONSEQUENTIAL DAMAGES.

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