

Electrical insulating material

ELAN® HT-180 FI 14220

Description: ELAN® HT-180 FI 14220 is a PET film, that is coated with a layer of ELANTAS PDF, Inc. Tritherm® polyamideimide on both sides.

Properties: ELAN® HT-180 FI 14220 offers superior electrical properties, low moisture absorption, excellent adhesion to impregnating resins and chemical/refrigerant resistance. Its UL rating is class H.

Applications: ELAN® HT-180 FI 14220 can be used as a slot liner, wedges and phase application in electrical motor manufacture and repair.

Delivery forms: ELAN® HT-180 FI 14220 can be delivered as die-cut or customized cut, roll (up to width 1400 mm) or tape. The thicknesses range from 75 µm to 380 µm. Other delivery forms upon customer request.

Storage conditions: ELAN® HT-180 FI 14220 should be stored in dry rooms at room temperature (20°C, 50% r.h.). ELAN® HT-180 lasts for one year.

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Properties	Test method	Unit	Value		
Film thickness		µm	114	190	279
Dielectric strength	ASTM D149	Volts	11,000	14,300	16,100
Volume resistivity at 500 V DC	ASTM D257	Ohm.cm	10 ¹⁵	10 ¹⁵	10 ¹⁵
Surface resistivity at 500 V DC	ASTM D257	Ohm/cm ²	10 ¹³	10 ¹⁴	10 ¹⁴
Dielectric constant					
Initial			2.4	3.1	3.4
After 168 h water immersion			2.2	3.1	3.7
Dielectric loss factor					
Initial			0.03	0.003	0.008
After 168 h water immersion			0.02	0.005	0.008
Water absorption, 24 h		%	0.7	0.5	0.4
Freon extraction		%	0.1	0.1	0.1
Adhesion with impregnating resin	ASTM D3359		Excellent		
Tensile strength	ASTM D882	MPa	137	134	107
Tensile modulus	ASTM D882	MPa	3235	3150	2360
Tear strength	ASTM D1004	N/mm	378	394	388
elongation	ASTM D882	%	88	106	144
Thermal conductivity					
215 µm – 26°C/90°C/128°C	ASTM E1530	W*m ⁻¹ *K ⁻¹	0.19/0.18/0.18		
270 µm – 26°C/90°C/128°C			0.20/0.19/0.19		

Trademark information: ELAN® is a registered trademark of company ELANTAS Beck India Ltd.

Tritherm® is a registered trademark of company ELANTAS Beck India Ltd.

Dr. Dietrich Müller GmbH

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Please note:

The information in this data sheet is based on our current knowledge and experience. They do not disengage the fabricator and the user from own tests and inspections because of the plenty of possible effects. There is no judicial binding assurance of certain properties or of the qualification for a concrete application in our declaration. We recommend consulting us in individual cases. The acceptor of our products has to observe possible industrial property rights as well as present laws by himself.

Dr. Dietrich Müller GmbH