



# THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

## PACTLAM® L9003

<b>Item:</b>	<b>Pactlam® L9003 H-Class Composite Laminate</b>		
<b>Description:</b>	<p>Pactlam® L9003 is an H-Class composite laminate comprised of epoxy-glass cloth, meta-aramid paper (Nomex® 410), and an electrically insulating film. The outside surfaces of Pactlam® L9003 are smooth epoxy filled, fine glass cloth. Pactlam® L9003 is an excellent electrical insulator that maintains such properties over prolonged periods of high-voltage exposure. It also maintains these electrical properties after withstanding mechanical damage due to its proprietary construction. Pactlam® L9003 has good mechanical properties that are maintained at elevated temperatures. The laminate can be produced in long strips and in various cross-sectional shapes such as L and U sections. Its common application is for rotor slot insulation in turbo generators. With epoxy-glass cloth outside surfaces, it has a low-coefficient of friction.</p>		
<b>Availability:</b>		<b>English Units (in)</b>	<b>SI Units (mm)</b>
	<b>Material Format:</b>	Thicknesses: 0.030 / 0.038 / 0.046 / 0.048 / 0.060 / 0.070	0.762 / 0.9652 / 1.1684 / 1.2192 / 1.524 / 1.778
	<b>Fabricated Parts:</b>	The Gund Company custom fabricates insulation materials to the exact specifications and drawings specified by our customers.	

Key Characteristics	Units	Typical Values	Test Method
<b>Composition</b>			
Epoxy Glass Cloth	% Volume	≈60	--
Meta-Aramid Paper	% Volume	≈30	--
Polyimide Film	% Volume	≈10	--
Density	g/cm <sup>3</sup>	1.5 ±.1	IEC 60641-2
<b>Mechanical Properties</b>			
Flexural Strength Crosswise at 23°C	psi	≥ 35,000	ASTM D790
Flexural Strength Crosswise at 150°C	psi	≥ 27,500	ASTM D790
Flexural Strength Lengthwise at 23°C	psi	≥ 45,000	ASTM D790
Flexural Strength Lengthwise at 150°C	psi	≥ 35,500	ASTM D790
Flexural Modulus Crosswise at 23°C	ksi	≥ 1,700	ASTM D790
Flexural Modulus Crosswise at 150°C	ksi	≥ 1,400	ASTM D790
Flexural Modulus Lengthwise at 23°C	ksi	≥ 1,800	ASTM D790
Flexural Modulus Lengthwise at 150°C	ksi	≥ 1,450	ASTM D790
Tensile Strength Crosswise at 23°C	psi	≥ 20,000	ASTM D638
Tensile Strength Lengthwise at 23°C	psi	≥ 30,000	ASTM D638
Impact Resistance	inch-lbs.	≥10	ASTM D5420
Coefficient of Friction	--	≤ 0.20	ASTM D1894
Ball-on-Cavity Compression Test	kV Endured	≥ 24	GE Spec. C50A40
<b>Electrical Properties</b>			
Comparative Tracking Index	V	350	ASTM D3638
Dielectric Strength at 23°C - Perpendicular to Laminations	kV	≥ 30	ASTM D149
Voltage Endurance at 10kV - Perpendicular to Lamination	Hrs	≥ 100	ASTM D149
<b>Thermal Properties</b>			
Temperature Index	°C	≥ 180	--

AS9100 Certified QMS | ISO9001 Certified QMS | RoHS Compliant | ITAR Compliant

Data supplied above are typical values and are not to be considered specification values. All of the information, suggestions and recommendations pertaining to the properties and uses of the products herein are based upon tests and data believed to be accurate; however, the final determination regarding suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty, expressed or implied, including, without limitation warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.