ENGINEERING DATA SHEET
GRADE: SPAULDITE® L-589 LAMINATE SHEET

Reprint of: _____ **Issued:** 0506

Spauldite® Grade L-589 is a fine weave cotton fabric-base phenolic laminate specifically designed to meet the exacting and particular requirements for rotor blades used in air operated tools, compressors, pumps, etc. An ideal rotor blade material should be hard for good wear, well bonded, dimensionally stable under operating conditions, and machinable to close tolerances.

MAJOR FEATURES

- Good Mechanical Strength
- Excellent Wear Resistance
- Good Dimensional Stability
- Available as Finished Vanes

APPLICATIONS

Grade L-589 is used as rotor vanes in air tools, compressors and pumps.

ELECTRIAL CHARACTERISTICS

This grade is not recommended for electrical use.

MECHANICAL CHARACTERISTICS

FABRICATION

Supplied as fabricated vanes.
Contact Spaulding Fabrication Division, Rochester, NH for prototypes or sample vanes.

STANDARD SHEET SIZE[1]: 48” X 36”
48” X 48”

COLOR: NATRAUL BROWN

THICKNESS: .031” –3.000”

[1] Available in fabricated parts only.

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PROPERTY CHARACTERISTICS

PROPERTY	ASTM TEST METHOD	CONDITIONING & TYPE OF TEST	THICKNESS INCHES	AVERAGE TYPICAL VALUES		INDUSTRY REQUIREMENTS	
				ENGLISH	SI	ENGLISH	SI
MECHANICAL							
Bonding Strength	D-229	A Lengthwise Crosswise	.500	2,180 lbs 2,080 lbs	9.70 kN 9.25 kN	≥1,600 lbs ≥1,600 lbs	≥7.1 kN ≥7.1 kN
Compressive Strength Flatwise	D-229	A	.125	47.8 ksi	329.4 MPa	≥35.0 ksi	≥241.3MPa
Flexural Strength Flatwise	D-229	A Lengthwise Crosswise	 .125 .125	 22.6 ksi 18.8 ksi	 156.1 MPa 129.6 MPa	 ≥18.0 ksi ≥15.0 ksi	MPa ≥124.1 ≥103.4
Izod Impact Edgewise Notched	D-229	E-48/50 Lengthwise Crosswise	 .125 .125	 2.37 ft-lbs/in 2.24 ft-lbs/in	 .126 J/mm .120 J/mm	 ≥1.8 ft-lbs/in ≥1.5 ft-lbs/in	 ≥.096 J/mm ≥.080 J/mm
Tensile Strength	D-229	A Lengthwise Crosswise	 .125 .125	 13.9 ksi 11.1 ksi	 95.8 MPa 76.5 MPa	 NR NR	 NR NR
PHYSICAL							
Density	D-792	A	.125	.049 lbs/in^3	1.36 g/cm^3	≥.047 lbs/in^3	≥1.3 g/cm^3
Rockwell Hardness	D-229	A	.125	M-106	M-106	M100-115	M100-115
Water Absorption	D-229	E-1/105+ D1-24/23	.125	1.15%	1.15%	≤1.6%	≤1.6%