

NP193E

TECHNICAL DATA BULLETIN

GRADE: NP193E

NEMA LI 1-1998 Grade: --

U.L. LISTED: N

DESCRIPTION: 17 oz. aramid and "soft glass" fibers are combined to make a fabric that is stronger than pure aramid and less abrasive than glass fabrics. This material is impregnated with a high temperature epoxy resin matrix, which produces a composite with excellent mechanical strength at elevated temperatures and adverse environments.

TYPICAL PROPERTIES

		UNITS	VALUE		
			Thickness Tested		
			0.125"	0.500"	
PHYSICAL PROPERTIES					
Specific Gravity (ASTM D792)		-		1.42	
Rockwell Hardness (ASTM D785)	0.250" Build-up	M Scale	100		
Moisture Absorption (ASTM D570)	Condition D ₁ -24/23	%	0.23		
Flexural Strength (ASTM D790)	Condition A	psi	41,300 / 19,100		
	LW / CW	(MPa)	(284.8) / (131.7)		
	Condition E-1/150: T-150	psi	33,700 / 16,100		
	LW / CW	(MPa)	(232.4) / (111.0)		
Flexural Modulus (ASTM D790)	Condition A	kpsi	1,800 / 1,700		
	LW / CW	(GPa)	(12.4) / (11.7)		
Tensile Strength (ASTM D638)	Condition A	psi	26,200 / 9,100		
	LW / CW	(MPa)	(180.6) / (62.7)		
Izod Impact Strength (ASTM D256)	Condition A	ft-lb/in	13.00 / 9.00		
	LW / CW	(J/cm)	6.94 / 4.80		
Compressive Strength (ASTM D695)	Condition A	psi	27,600		
	Flatwise	(MPa)	(190.3)		
Bonding Strength (ASTM D229)	Condition A	lb	2,500		
		(kg)	(1,134.0)		
Shear Strength (ASTM D732)	Condition A	psi	17,000		
	Perpendicular	(MPa)	(117.2)		

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TYPICAL PROPERTIES (continued)

	UNITS	VALUE		
		Thickness Tested		
		0.125"	0.500"	
THERMAL PROPERTIES				
Maximum Operating Temperature ¹	°C			
Temperature Index ¹ (UL Bulletin 746b) Electrical / Mechanical	°C	/ 180		
Coefficient of Thermal Expansion (IPC-TM 650-2.4.24) X-axis / Y-axis	" / °C x10 ⁻⁶	44.4 / 26.0		
Flammability Vertical Condition A (UL Bulletin 94)	Class	HB		

¹ This temperature is a recommendation only, and based upon experience in various applications. The maximum operating temperature is dependent upon the application and should be investigated prior to use.

This data, while believed to be accurate and based on reliable analytical methods, is for informational purposes only. The terms and conditions of the agreement under which it is sold will govern any sales of this product. Data supplied above are "typical values"; not to be considered "specification values".

To assure the material's performance is adequate for a specific application; customers should verify, independent of Norplex-Micarta, performance characteristics of interest.

It is the responsibility of the users of this information to make sure that they have the latest version of this TDB, and are urged to check with Customer Service or, preferably our web site, www.norplex-micarta.com, to determine if the information is the most current available.

Specification writers: Contact Norplex-Micarta for specification values before submission.