NORPLEX MICARTA
Global Thermoset Composite Solutions

NP193PM

TECHNICAL DATA BULLETIN

GRADE: NP193PM **NEMA LI 1-1998 Grade: --** **U.L. LISTED: N**

DESCRIPTION: NP193PM is composed of a 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 phenolic resin matrix which includes a non-conducting solid lubricant. This composite has excellent mechanical strength at elevated temperatures and adverse environments. Applications include wear plates for conveyor systems, valve plates, and compressor and pump vanes.

TYPICAL PROPERTIES

		UNITS	VALUE		
			Thickness Tested		
			0.125″	0.500″	
PHYSICAL PROPERTIES					
Specific Gravity *(ASTM D792)*		-		1.54	
Rockwell Hardness *(ASTM D785)*	0.250″ Build-up	M Scale	95		
Moisture Absorption *(ASTM D570)*	Condition D_1-24/23	%	1.94		
Flexural Strength *(ASTM D790)*	Condition A LW / CW	psi (MPa)	36,700 / 17,500 (253.0) / (120.7)		
	Condition E-1/150: T-150 LW / CW	psi (MPa)	29,200 / 15,500 (201.3) / (106.9)		
Tensile Strength *(ASTM D638)*	Condition A LW / CW	psi (MPa)	25,600 / 9,700 (176.5) / (66.9)		
Izod Impact Strength *(ASTM D256)*	Condition A LW / CW	ft-lb/in (J/cm)			
	Condition E-48/50 LW / CW	ft-lb/in (J/cm)		22.90 / 7.30 (12.22) / (3.90)	
Compressive Strength *(ASTM D695)*	Condition A Flatwise	psi (MPa)		40,700 (280.6)	
Bonding Strength *(ASTM D229)*	Condition A	lb (kg)		2,400 (1,088.6)	

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TYPICAL PROPERTIES (continued)

	UNITS	VALUE		
		Thickness Tested		
		0.125″	0.500″	
THERMAL PROPERTIES				
Temperature Index [1] *(UL Bulletin 746b)* Electrical / Mechanical	°C	/ 165		
Coefficient of Thermal Expansion *(IPC-TM 650-2.4.24)* X-axis / Y-axis	"/"/°C $x10^{-6}$	27.0 / 39.8		

[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.