

NP629

TECHNICAL DATA BULLETIN

GRADE: NP629

NEMA LI 1-1998 Grade: XX

U.L. LISTED: N

DESCRIPTION: NP629 is a paper-phenolic high-pressure laminate and intended primarily for mechanical applications, but is suitable for electrical applications as well. The electrical properties are not quite as good as those of NP630. NP629 meets the requirements of ANSI/NEMA IM 60000-2021 Grade XX, ASTM D709 Type I Grade XX and MIL-I-24768/11 PBG.

TYPICAL PROPERTIES

		UNITS	VALUE		
			Thickness Tested		
			0.0625"	0.125"	0.500"
PHYSICAL PROPERTIES					
Specific Gravity (ASTM D792)		-			1.35
Rockwell Hardness (ASTM D785)		0.250" Build-up	M Scale	95	
Moisture Absorption (ASTM D570)		Condition D ₁ -24/23	%	2.00	
Flexural Strength (ASTM D790)		Condition A LW / CW	psi (MPa)	22,000 / 17,000 (151.7) / (117.2)	
Tensile Strength (ASTM D638)		Condition A LW / CW	psi (MPa)		13,500 / 11,500 (93.1) / (79.3)
Izod Impact Strength (ASTM D256)		Condition A	ft-lb/in (J/cm)		
		LW / CW			
		Condition E-48/50 LW / CW	ft-lb/in (J/cm)		0.50 / 0.40 (0.27) / (0.21)
Compressive Strength (ASTM D695)		Condition A Flatwise	psi (MPa)		25,000 (172.4)
Bonding Strength (ASTM D229)		Condition A	lb (kg)		900 (408.2)
Shear Strength (ASTM D732)		Condition A Perpendicular	psi (MPa)	11,500 (79.3)	

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TYPICAL PROPERTIES (continued)

	UNITS	VALUE		
		Thickness Tested		
		0.0625"	0.125"	0.500"
THERMAL PROPERTIES				
Temperature Index ¹ (UL Bulletin 746b)	Electrical / Mechanical	°C	130 / 130	
Flammability Rating (UL Bulletin 94)	Condition A	Class	HB	
ELECTRICAL PROPERTIES				
Dissipation Factor @ 1 MHz (ASTM D150)	Condition A	-		
	Condition D-24/23	-	0.052	
Relative Permittivity @ 1 MHz (ASTM D150)	Condition A	-		
	Condition D-24/23	-	6.20	
Breakdown Voltage (ASTM D149)	Condition A	kVolts	40	
	Condition D-48/50	kVolts	5	

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.