

# NP613

## TECHNICAL DATA BULLETIN

GRADE: NP613

NEMA LI 1-1998 Grade: --

U.L. LISTED: N

DESCRIPTION: NP613 is constructed from electrical grade of kraft paper and a specially modified epoxy resin system. It is designed to be used in tap changers, coil support plates and terminal panels for transformers and their accessories.

### TYPICAL PROPERTIES

		UNITS	VALUE		
			Thickness Tested		
			0.0625"	0.125"	0.500"
<b>PHYSICAL PROPERTIES</b>					
<b>Specific Gravity</b> (ASTM D792)		-			1.35
<b>Rockwell Hardness</b> (ASTM D785)	0.250" Build-up	M Scale	90		
<b>Moisture Absorption</b> (ASTM D570)	Condition D <sub>1</sub> -24/23	%	2.80		
		%			0.59
<b>Flexural Strength</b> (ASTM D790)	Condition A	psi	34,000 / 26,000		27,000 / 22,000
	LW / CW	(MPa)	(234.4) / (179.3)		(186.2) / (151.7)
<b>Flexural Modulus</b> (ASTM D790)	Condition A	kpsi	2,000 / 1,500		
	LW / CW	(GPa)	(13.8) / (10.3)		
<b>Izod Impact Strength</b> (ASTM D256)	Condition A	ft-lb/in			
	LW / CW	(J/cm)			
	Condition E-48/50	ft-lb/in			1.25 / 1.00
	LW / CW	(J/cm)			(0.67) / (0.53)
<b>Compressive Strength</b> (ASTM D695)	Condition A	psi			40,000
	Flatwise	(MPa)			(275.8)
<b>Bonding Strength</b> (ASTM D229)	Condition A	lb			1,000
	Condition D-48/50	(kg)			(453.6)
		lb			770
		(kg)			(349.3)

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## TYPICAL PROPERTIES (continued)

		UNITS	VALUE		
			Thickness Tested		
			0.0625"	0.125"	0.500"
<b>THERMAL PROPERTIES</b>					
<b>Temperature Index</b> <sup>1</sup> (UL Bulletin 746b)	Electrical / Mechanical	°C	140 / 140		
<b>Flammability Rating</b> (UL Bulletin 94)	Condition A	Class	HB		
<b>ELECTRICAL PROPERTIES</b>					
<b>Dissipation Factor</b> @ 1 MHz (ASTM D150)	Condition A	-			
	Condition D-24/23	-	0.040		
<b>Relative Permittivity</b> @ 1 MHz (ASTM D150)	Condition A	-			
	Condition D-24/23	-	5.13	4.60	
<b>Breakdown Voltage</b> (ASTM D149)	Condition A	kVolts	80	75	65
	Condition D-48/50	kVolts	4	5	6

<sup>1</sup> 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](http://www.norplex-micarta.com), to determine if the information is the most current available.

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