

# NP313

## TECHNICAL DATA BULLETIN

GRADE: NP313

U.L. LISTED: N

DESCRIPTION: Canvas phenolic laminate with molybdenum disulfide lubricant. The mechanical properties are slightly lower than NP310. NP313 is used for lubricity in the composite when carbon (graphite) cannot be used because of conductivity.

### TYPICAL PROPERTIES

		UNITS	VALUE		
			Thickness Tested		
			0.0625"	0.125"	0.500"
PHYSICAL PROPERTIES					
Specific Gravity (ASTM D792)		-			1.40
Rockwell Hardness (ASTM D785)0.250" Build-up		M Scale	100		
Moisture Absorption (ASTM D570)Condition A		%	1.95		
Flexural Strength (ASTM D790)Condition ALW / CW		psi (Mpa)	19,000 / 17,000 (131.0) / (117.2)		
Flexural Modulus (ASTM D790)Condition ALW / CW		kpsi (Gpa)	1,200 / 1,000 (8.3) / (6.9)		
Tensile Strength (ASTM D638)Condition ALW / CW		psi (Mpa)		11,000 / 9,000 (75.8) / (62.1)	
Izod Impact Strength (ASTM D256)		Condition ALW / CW	ft-lb/in (J/cm)		
		Condition E-48/50	ft-lb/in		1.70 / 1.40
		LW / CW	(J/cm)		(0.91) / (0.75)
Compressive Strength (ASTM D695)Condition AFlatwise		psi (Mpa)			36,000 (248.2)
Bonding Strength (ASTM D229)Condition A		lb (kg)			1,900 (861.8)
Shear Strength (ASTM D732)Condition APerpendicular		psi (Mpa)	13,500 (93.1)		

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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	/ 145		
<b>Coefficient of Thermal Expansion</b> (IPC-TM 650-2.4.24) X-axis / Y-axis	" / °C x10 <sup>-6</sup>		18.0 / 24.0	
<b>Flammability Rating</b> (UL Bulletin 94) Condition A	Class	HB		

<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.

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