

# Specification

NEMA: XX

U.L. LISTED: N

DESCRIPTION: NEMA XX is a paper-phenolic high-pressure laminate and intended primarily for mechanical applications, but is suitable for electrical applications as well. Meets or exceeds Mil-I-24768/21

## TYPICAL PROPERTIES

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

# Specification

NEMA: XX

U.L. LISTED: N

## TYPICAL PROPERTIES (continued)

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

<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.

The data within this document is for reference only. Values above are typical for this grade of material.

It is the responsibility of the end user of this information to validate the data in this document. K&E Plastics, Inc. assumes no liability for the use of this data.

Users are urged to contact K&E Plastics, Inc. to determine if the Specification has been revised.