



NP610

TECHNICAL DATA BULLETIN

GRADE: NP610

NEMA: X

U.L. LISTED: N

DESCRIPTION: Phenolic paper based grade for mechanical applications. Good tensile, compressive and flexural strength. Primarily a machining material, but may be hot punched up to .093" thick.

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	90	
Moisture Absorption (ASTM D570)	Condition A	%			
	Condition D ₁ -24/23	%	1.80		0.58
Flexural Strength (ASTM D790)	Condition A	psi (MPa)	34,000 / 28,000 (234.4) / (193.1)		
Flexural Modulus (ASTM D790)	Condition A	kpsi (GPa)	1,900 / 1,400 (13.1) / (9.7)		
	LW / CW				
Tensile Strength (ASTM D638)	Condition A	psi (MPa)		17,000 / 13,000 (117.2) / (89.6)	
	LW / CW				
Izod Impact Strength (ASTM D256)	Condition A	ft-lb/in (J/cm)			
	LW / CW				
	Condition E-48/50	ft-lb/in (J/cm)			0.82 / 0.76 (0.44) / (0.41)
Compressive Strength (ASTM D695)	Condition A	psi (MPa)			35,000 (241.3)
	Flatwise				
Bonding Strength (ASTM D229)	Condition A	lb (kg)			1,000 (453.6)
Shear Strength (ASTM D732)	Condition A	psi (MPa)	15,000 (103.4)		
	Perpendicular				



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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		
Coefficient of Thermal Expansion (IPC-TM 650-2.4.24)	X-axis / Y-axis °F/°C x10 ⁻⁶		13.0 / 17.0	
Flammability Rating (UL Bulletin 94)	Condition A Class	HB		
ELECTRICAL PROPERTIES				
Breakdown Voltage (ASTM D149)	Condition A kVolts	40		
Electric Strength (ASTM D149)	Condition A Volts/mil (kV/cm)	600 (236.2)		
Arc Resistance (ASTM D495)	Condition A sec		90	