

Sheet Products - Property Comparison

			NP101	NP193E	NP193P	NP193PM
			Nylon	Aramid/Glass		
			Phenolic	Epoxy	Phenolic	Phenolic
PHYSICAL PROPERTIES						
Specific Gravity (0.500")		-	1.15	1.42	1.43	1.54
Rockwell Hardness (0.250" Build-up)		M Scale	90	100	85	95
Moisture Absorption (0.125")	Condition D ₁ -24/23	%	0.30	0.23	2.62	1.94
Flexural Strength (0.125")	Condition A Lengthwise / Crosswise	psi	18,000 / 13,000	41,300 / 19,100	30,700 / 14,100	36,700 / 17,500
	Condition E-1/150 T150 Lengthwise / Crosswise		-- / --	33,700 / 16,100	24,600 / 11,700	29,200 / 15,500
Flexural Modulus (0.125")	Lengthwise / Crosswise	kpsi	700 / 550	1,800 / 1,700	1,800 / 1,700	
Tensile Strength (0.125")	Lengthwise / Crosswise	psi	8,000 / 8,000	26,200 / 9,100	21,600 / 8,300	25,600 / 9,700
Izod Impact Strength (0.500")	Condition E-48/50 Lengthwise / Crosswise	ft-lb/in (notched)	-- / --	13.00 / 9.00	5.00 / 4.50	22.90 / 7.30
Compressive Strength (0.500")	Flatwise	psi	25,000	27,600	36,600	40,700
Bonding Strength (0.500")	Condition A	lb	1,800	2,500	--	2,400
	Condition D-48/50		--	--	--	--
Shear Strength (0.125")	Perpendicular	psi	14,000	17,000	--	Could Not Break
THERMAL PROPERTIES						
Temperature Index ¹	Electrical / Mechanical	°C	-- / 105	-- / 180	-- / 165	-- / 165
Coefficient of Thermal Expansion (0.125")	X-axis / Y-axis	"/"/°Cx10 ⁻⁶	-- / --	44.4 / 26.0	-- / --	27.0 / 39.8
Flammability Rating U.L. 94 (0.062")	Condition A	Class	HB	HB	HB	
ELECTRICAL PROPERTIES						
Dissipation Factor (0.062")	Condition D ₁ -24/23	-	0.035	--	--	--
Permittivity (0.062")	Condition D ₁ -24/23	-	3.75	--	--	--
Breakdown Voltage (0.062")	Condition A	kV	65	--	--	--
	Condition D-48/50		45	--	--	--
Electric Strength (0.062")	Condition A	V/mil	650	--	--	--
	Condition D-48/50		500	--	--	--
Arc Resistance D495 (0.125")	Condition A	sec	80	--	--	--
Comparative Tracking Index D3638 (0.125")		V	150	--	--	--

NOTE a: A double dash (--) indicates that the value has not been determined or is not applicable to the product.

NOTE b: All testing per ASTM D348 unless otherwise noted.

¹ NEMA LI-6: This temperature is a recommendation only and is based upon experience in various applications. The maximum operating temperature is dependent upon the application and should be investigated prior to use.