

**Sheet Products - Property Comparison**

			ES-1	ES-2	ES-3	NP329
			Paper			Linen
			Melamine			
<b>PHYSICAL PROPERTIES</b>						
Specific Gravity (0.062")		-	1.40	1.40	1.40	1.47
Rockwell Hardness (0.250" Build-up)		M Scale	100	100	100	110
Moisture Absorption (0.062")	Condition D <sub>1</sub> -24/23	%	2.50	2.50	2.50	1.80
Flexural Strength (0.062")	Condition A Lengthwise / Crosswise	psi	13,500 / 13,500	13,500 / 13,500	13,500 / 13,500	29,000 / 26,000
	Condition E-1/150 T150 Lengthwise / Crosswise		-- / --	-- / --	-- / --	-- / --
Flexural Modulus (0.062")	Lengthwise / Crosswise	kpsi	1,500 / 1,500	1,500 / 1,500	1,500 / 1,500	1,800 / 1,400
Tensile Strength (0.125")	Lengthwise / Crosswise	psi	10,500 / 9,200	10,500 / 9,200	10,500 / 9,200	16,000 / 9,700
Izod Impact Strength (0.500")	Condition E-48/50 Lengthwise / Crosswise	ft-lb/in (notched)	0.60 / 0.55	0.60 / 0.55	0.60 / 0.55	1.90 / 1.75
Compressive Strength (0.500")	Flatwise	psi	25,000	25,000	25,000	34,000
Bonding Strength (0.500")	Condition A	lb	1,000	1,000	1,000	1,900
	Condition D-48/50		--	--	--	--
Shear Strength (0.062")	Perpendicular	psi	--	--	--	13,000
<b>THERMAL PROPERTIES</b>						
Temperature Index <sup>1</sup>	Electrical / Mechanical	°C	-- / 120	-- / 120	-- / 120	-- / 130
Coefficient of Thermal Expansion (0.125")	X-axis / Y-axis	"/"/°Cx10 <sup>-6</sup>	-- / --	-- / --	-- / --	-- / --
Flammability Rating U.L. 94 (0.062")	Condition A	Class	V-0	V-0	V-0	HB
<b>ELECTRICAL PROPERTIES</b>						
Dissipation Factor (0.062")	Condition D <sub>1</sub> -24/23	-	--	--	--	0.050
Permittivity (0.062")	Condition D <sub>1</sub> -24/23	-	--	--	--	7.00
Breakdown Voltage (0.062")	Condition A	kV	50	50	50	20
	Condition D-48/50		5	5	5	5
Electric Strength (0.062")	Condition A	V/mil	--	--	--	500
	Condition D-48/50		--	--	--	300
Arc Resistance D495 (0.125")	Condition A	sec	120	120	120	120
Comparative Tracking Index D3638 (0.125")		V	--	--	--	200

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.

<sup>1</sup> 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.