

Sheet Products - Property Comparison

			ES-1	ES-2	ES-3	ES-4
			Paper			
			Melamine			
PHYSICAL PROPERTIES						
Specific Gravity (0.062")		-	1.40	1.40	1.40	1.40
Rockwell Hardness (0.250" Build-up)		M Scale	100	100	100	100
Moisture Absorption (0.062")	Condition D ₁ -24/23	%	2.50	2.50	2.50	2.50
Flexural Strength (0.062")	Condition A Lengthwise / Crosswise	psi	13,500 / 13,500	13,500 / 13,500	13,500 / 13,500	13,500 / 13,500
	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	1,500 / 1,500
Tensile Strength (0.125")	Lengthwise / Crosswise	psi	10,500 / 9,200	10,500 / 9,200	10,500 / 9,200	10,500 / 9,200
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	0.60 / 0.55
Compressive Strength (0.500")	Flatwise	psi	25,000	25,000	25,000	25,000
Bonding Strength (0.500")	Condition A	lb	1,000	1,000	1,000	1,000
	Condition D-48/50		--	--	--	--
Shear Strength (0.062")	Perpendicular	psi	--	--	--	--
THERMAL PROPERTIES						
Temperature Index ¹	Electrical / Mechanical	°C	120 / 120	120 / 120	120 / 120	120 / 120
Coefficient of Thermal Expansion (0.125")	X-axis / Y-axis	"/"/°Cx10 ⁻⁶	-- / --	-- / --	-- / --	-- / --
Flammability Rating U.L. 94	Condition A	Class	V-0	V-0	V-0	V-0
ELECTRICAL PROPERTIES						
Dissipation Factor (0.062")	Condition D ₁ -24/23	-	--	--	--	--
Permittivity (0.062")	Condition D ₁ -24/23	-	--	--	--	--
Breakdown Voltage (0.062")	Condition A	kV	50	50	50	50
	Condition D-48/50		5	5	5	5
Electric Strength (0.062")	Condition A	V/mil	--	--	--	--
	Condition D-48/50		--	--	--	--
Arc Resistance D495 (0.125")	Condition A	sec	120	120	120	120
Comparative Tracking Index D3638 (0.125")		V	--	--	--	--

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.

Sheet Products - Property Comparison

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

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