

## ES1 TECHNICAL DATA BULLETIN

GRADE: ES1 NEMA -- U.L. LISTED: N

DESCRIPTION: Composed of white melamine paper core with various pigmented cover sheets.

## **TYPICAL PROPERTIES**

				VALUE			
			UNITS	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	100			
Moisture Absorption							
(ASTM D570)	Condition D <sub>1</sub> -24/23		%	2.50			
Flexural Strength	Condition A		psi	13,500 / 13,500			
(ASTM D790)		LW / CW	(MPa)	(93.1) / (93.1)			
Flexural Modulus	Condition A		kpsi	1,500 / 1,500			
(ASTM D790)		LW / CW	(GPa)	(10.3) / (10.3)			
Tensile Strength	Condition A		psi		10,500 / 9,200		
(ASTM D638)		LW / CW	(MPa)		(72.4) / (63.4)		
Izod Impact Strength	Condition A		ft-lb/in				
(ASTM D256)		LW / CW	(J/cm)				
	Condition E-48/		ft-lb/in			0.60 / 0.55	
		LW / CW	(J/cm)			(0.32) / (0.29)	
Compressive Strength	Condition A		psi			25,000	
(ASTM D695)		Flatwise	(MPa)			(172.4)	
Bonding Strength	Condition A		lb			1,000	
(ASTM D229)			(kg)			(453.6)	



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## **TYPICAL PROPERTIES (continued)**

			VALUE			
		UNITS	Thickness Tested			
			0.0625"	0.125"	0.500"	
THERMAL PROPERTIES						
Temperature Index <sup>1</sup>						
(UL Bulletin 746b)	Electrical / Mechanical	°C	/ 120			
Flammability Vertical	Condition A					
(UL Bulletin 94)		Class	V-0			
ELECTRICAL PROPERTIES						
Breakdown Voltage	Condition A					
(ASTM D149)		kVolts	50			
	Condition D-48/50	kVolts	5		_	
Arc Resistance	Condition A					
(ASTM D495)		sec		120		

<sup>&</sup>lt;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.

This data, while believed to be accurate and based on reliable analytical methods, is for informational purposes only. The terms and conditions of the agreement under which it is sold will govern any sales of this product. Data supplied above are "typical values"; not to be considered "specification values".

To assure the material's performance is adequate for a specific application; customers should verify, independent of Norplex-Micarta, performance characteristics of interest.

It is the responsibility of the users of this information to make sure that they have the latest version of this TDB, and are urged to check with Customer Service or, preferably our web site, <a href="www.norplex-micarta.com">www.norplex-micarta.com</a>, to determine if the information is the most current available.

Specification writers: Contact Norplex-Micarta for specification values before submission.