

MC511A

TECHNICAL DATA BULLETIN

GRADE: MC511A

NEMA LI 1-1998 Grade: G-11

U.L. LISTED: Y

DESCRIPTION: MC511A is a high strength, glass epoxy laminate that is specially formulated to meet power generation producer's exacting standards where higher strength at elevated temperatures are required. MC511A is certifiable to ANSI/NEMA IM 60000-2021 Grade G-11, MIL-I-24768/3, Type GEB, ASTM D 709 Type IV Grade G-11 and IEC-60893-3-2 EP GC 203 and is halogen free to meet the European restrictions.

TYPICAL PROPERTIES

		UNITS	VALUE		
			Thickness Tested		
			0.0625"	0.125"	0.500"
PHYSICAL PROPERTIES					
Specific Gravity (ASTM D792)		-			1.91
Rockwell Hardness (ASTM D785)	0.250" Build-up	M Scale	115		
Moisture Absorption (ASTM D570)	Condition D ₁ -24/23	%	0.10		
Flexural Strength (ASTM D790)	Condition A	psi	71,500 / 61,000		
	LW / CW	(MPa)	(493.0) / (420.6)		
	Condition E-1/150: T-150	psi	37,000 /		
	LW / CW	(MPa)	(255.1) /		
Izod Impact Strength (ASTM D256)	Condition A	ft-lb/in			
	LW / CW	(J/cm)			
	Condition E-48/50	ft-lb/in			18.00 / 14.00
	LW / CW	(J/cm)			(9.61) / (7.47)
Bonding Strength (ASTM D229)	Condition A	lb			2,200
		(kg)			(997.9)

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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	170 / 180	
Tg by DMA		°C		180
Flammability Rating (UL Bulletin 94)	Condition A	Class	HB	
ELECTRICAL PROPERTIES				
Dissipation Factor @ 1 MHz (ASTM D150)	Condition A	-		
	Condition D-24/23	-	0.028	
Relative Permittivity @ 1 MHz (ASTM D150)	Condition A	-		
	Condition D-24/23	-	4.50	
Breakdown Voltage (ASTM D149)	Condition A	kVolts	65	
Electric Strength (ASTM D149)	Condition A	Volts/mil (kV/cm)	610 (240.2)	
	Condition D-48/50	Volts/mil (kV/cm)	650 (255.9)	
Arc Resistance (ASTM D495)	Condition A	sec		185

¹ 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, www.norplex-micarta.com, to determine if the information is the most current available.

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