

RT511M

TECHNICAL DATA BULLETIN

GRADE: RT511M

NEMA LI 1-1998 GRADE: G-11, type

U.L. LISTED: Y

DESCRIPTION: RT511M meets all of the requirements of NEMA G-10, with the added feature of having excellent strength at elevated temperatures. Typical applications include bushings, spacers and structural parts for power generation equipment. It is made with a medium weight glass fabric substrate. RT511M also complies with MIL-I-24768/2, Type GEE, ASTM D709 Type IV Grade G-10 and IEC 61212-3-1 EP GC 21 & 22.

TYPICAL PROPERTIES

	UNITS	VALUE		
		Specimen Tested (ID x OD)		
			0.75" x 1.00"	
PHYSICAL PROPERTIES				
Specific Gravity (ASTM D792)	-		1.86	
Rockwell Hardness (ASTM D785)	M Scale		105	
Moisture Absorption (ASTM D570)	Condition D ₁ -24/23	%	0.14	
Tensile Strength (ASTM D638)	Condition A	psi	39,000	
	Condition E-1/150: T-150	psi	32,000	
Compressive Strength (ASTM D695)	Condition A	psi	35,000	
	Condition E-1/150: T-150	psi	30,000	
Compressive Modulus (ASTM D695)	Condition A	kpsi	700	

RT511M - TYPICAL PROPERTIES (continued)

		UNITS	VALUE		
			Specimen Tested (ID x OD)		
				0.75" x 1.00"	
THERMAL PROPERTIES					
Temperature Index ¹	Electrical / Mechanical	°C		200 / 200	
Tg by DMA	Condition A	°C		≥ 170	
Flammability Rating (UL Bulletin 94)	Condition A	Class		HB	
ELECTRICAL PROPERTIES					
Dissipation Factor @ 1 MHz (ASTM D150)	Condition A	-		0.024	
	Condition D-24/23	-		0.034	
	Condition D-48/50	-		0.040	
Relative Permittivity @ 1 MHz (ASTM D150)	Condition A	-		4.39	
	Condition D-24/23	-		4.46	
	Condition D-48/50	-		4.62	
Breakdown Voltage (ASTM D149)	Condition A	kVolts		55	
	Condition D-48/50	kVolts		70	
Electric Strength (ASTM D149)	Condition A	Volts/mil		400	
	Condition D-48/50	Volts/mil		380	

¹ NEMA LI-6: 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. At this time G-11 tubing grades are not recognized by NEMA; however, they are recognized by IEC 61212-3-1; grade EP-GC-22. This grade has equivalent electrical properties to G-10 tubing but with higher mechanical strength at elevated temperatures.

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 contact Customer Service, or preferably our web site, www.norplex-micarta.com, to determine if information is the most current.

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