

RT511

TECHNICAL DATA BULLETIN

GRADE: RT511

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

U.L. LISTED: N

DESCRIPTION: RT511 uses a heavy weave glass fabric substrate meeting all of the requirements of NEMA G-10, with the added feature of having excellent strength at elevated temperatures. Additional versions of the RT511 series are available in medium and fine weave fabrics. Typical applications include bushings, spacers and structural parts for power generation equipment. RT511 also complies with ANSI/NEMA IM 60000-2021 Grade G-11, MIL-I-24768/2, Type GEE, and IEC 61212-3-1 EP GC 22.

TYPICAL PROPERTIES

	UNITS	VALUE		
		Specimen Tested (ID x OD)		
			0.75" x 1.00"	
PHYSICAL PROPERTIES				
Specific Gravity (ASTM D792)	-		1.80	
Rockwell Hardness (ASTM D785)	M Scale		110	
Moisture Absorption Condition D ₁ -24/23 (ASTM D570)	%		0.14	
Tensile Strength (ASTM D638)	Condition A	psi	39,500	
	Condition E-1/150: T-150	psi	32,500	
Compressive Strength (ASTM D695)	Condition A	psi	42,500	
	Condition E-1/150: T-150	psi	36,500	
Compressive Modulus (ASTM D695)	Condition A	kpsi	1,100	

RT511 - 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
Relative Permittivity @ 1 MHz (ASTM D150)	Condition A	-		4.39
	Condition D-24/23	-		4.46
Breakdown Voltage (ASTM D149)	Condition A	kVolts		60
	Condition D-48/50	kVolts		65
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.