

# MC507U

## TECHNICAL DATA BULLETIN

**GRADE: MC507U**

**NEMA LI 1-1998 Grade: G-7\*\***

**U.L. LISTED: N**

DESCRIPTION: MC507U is a utility grade, glass fabric combined with a silicone resin system. It can be substituted for NEMA G-7, in most heating, appliance insulation and some bearing applications. MC507U has excellent strength and electrical properties. \*\*MC507U complies with ANSI/NEMA IM 60000-2021 Grade G-7, IEC 60893-3-6 SI GC 201, and MIL-I-24768/17 – GSG, and NEMA LI 1-1998 Grade G-7 specifications with the exception of some specific electrical properties.\*\*

### TYPICAL PROPERTIES

	UNITS	VALUE		
		Thickness Tested		
		0.0625"	0.125"	0.500"
<b>PHYSICAL PROPERTIES</b>				
<b>Specific Gravity</b> (ASTM D792)	-			1.88
<b>Rockwell Hardness</b> (ASTM D785) 0.250" Build-up	M Scale	100		
<b>Moisture Absorption</b> (ASTM D570) Condition D <sub>1</sub> -24/23	%	0.19		
<b>Flexural Strength</b> (ASTM D790) Condition A LW / CW	psi (MPa)	24,300 / 21,700 (167.5) / (149.6)		
<b>Izod Impact Strength</b> (ASTM D256) Condition A LW / CW	ft-lb/in (J/cm)			
	Condition E-48/50 LW / CW	ft-lb/in (J/cm)		17.00 / 11.50 (9.07) / (6.14)
<b>Bonding Strength</b> (ASTM D229) Condition A	lb (kg)			750 (340.2)

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## TYPICAL PROPERTIES (continued)

		UNITS	VALUE		
			Thickness Tested		
			0.0625"	0.125"	0.500"
<b>THERMAL PROPERTIES</b>					
<b>Temperature Index</b> <sup>1</sup> (UL Bulletin 746b)	Electrical / Mechanical	°C	170 / 220		
<b>Flammability Vertical</b> (UL Bulletin 94)	Condition A	Class	V-0		
<b>ELECTRICAL PROPERTIES</b>					
<b>Dissipation Factor</b> @ 1 MHz (ASTM D150)	Condition A	-	0.018		
	Condition D-24/23	-	0.045		
<b>Relative Permittivity</b> @ 1 MHz (ASTM D150)	Condition A	-	4.55		
	Condition D-24/23	-	4.67		
<b>Breakdown Voltage</b> (ASTM D149)	Condition A	kVolts	55		
	Condition D-48/50	kVolts	32		
<b>Electric Strength</b> (ASTM D149)	Condition A	Volts/mil (kV/cm)	350 (137.8)		
<b>Arc Resistance</b> (ASTM D495)	Condition A	sec		200	

<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, [www.norplex-micarta.com](http://www.norplex-micarta.com), to determine if the information is the most current available.

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