Global Thermoset Composite Solutions

NP643

TECHNICAL DATA BULLETIN

GRADE: NP643 **NEMA GRADE:** -- **U. L. LISTED:** N

DESCRIPTION: NP643 is constructed from an electrical grade kraft paper and a high temperature specially modified epoxy resin system. It is designed to be used in tap changers, coil support plates and terminal panels for transformers and their accessories.

THICKNESS TESTED: 0.250″ & 0.500″

TYPICAL PROPERTIES

PHYSICAL PROPERTIES		UNITS	VALUE
Specific Gravity (0.500″)		-	1.40
Rockwell Hardness (0.250″)		M Scale	115
Moisture Absorption (0.250″, 0.500″) Condition D_1-24/23		%	0.60, 0.37
Flexural Strength (0.500″)	Condition A LW / CW	psi	27,700 / 20,800
Tensile Strength (0.500″)	LW / CW	psi	16,900 / 13,900
Impact Strength (0.500″)	LW / CW	ft-lb/in	0.65 / 0.56
Compressive Strength (0.500″)	Flatwise	psi	44,100
Bonding Strength (0.500″)		lb	900

TYPICAL PROPERTIES (continued)

THERMAL PROPERTIES	**UNITS**	**VALUE**
Temperature Index Electrical / Mechanical	°C	140/140[1]
T_g by DMA	°C	145
T_g by DSC	°C	130
Flammability Rating - U. L. 94 (0.062″)	Class	HB
ELECTRICAL PROPERTIES		
Dissipation Factor (0.500″) Condition A Condition D_1-24/23	-	0.054 0.057
Permittivity (0.500″) Condition A Condition D_1-24/23	-	6.6 4.5
Breakdown Voltage (0.500″) Condition A Condition D-48/50 Transformer Oil (1″ block – edgewise) Condition E1-95, T-95	kV	> 65 6 > 90
Electric Strength (0.500″)	Volts/mil	170
Arc Resistance (0.500″)	Sec	120
Comparative Tracking Index (0.500″)	Volts	150

[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.

The data presented, while believed to be accurate and representative of the material's characteristics, was compiled from a limited number totally independent tests using reliable analytical test methods. It is being provided for informational purposes only. We acknowledge that a larger data population may produce different results but have no means to predict what they may be. 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 information is most current.

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