

# NP522

## INTRODUCTORY TECHNICAL DATA BULLETIN

**GRADE:** NP522

**NEMA GRADE:** --

**U. L. LISTED:** N

**DESCRIPTION:** NP522 is a member of the *ShotBlocker*<sup>™</sup> family of products. Being a high performance composite manufactured from OCV Technical Fabrics ShieldStrand<sup>™</sup> reinforcement with a high-temperature phenolic resin system, NP522 was developed to comply with stringent Military requirements as a ballistic resistant material. NP522 complies with MIL-DTL-64154B, Class B, Code 2.

**THICKNESS TESTED:** 0.440", 0.500"

### TYPICAL PROPERTIES

BALLISTIC PROPERTIES		UNITS	VALUE
V50 Ballistic Limit (0.500")	CAL30FSP	fps	2460
GENERAL PHYSICAL PROPERTIES		UNITS	VALUE
Specific Gravity (0.440")		-	2.05
Rockwell Hardness (0.440")		M Scale	109
Moisture Absorption (0.440") Condition D <sub>i</sub> -24/23		%	1.0
Flexural Strength (0.440") Condition A	LW / CW	psi	29,400 / 28,400
Hot Flex Strength (0.440") Condition E-1/150, T-150	LW / CW	psi	20,900 / 19,800
Flexural Modulus (0.440") Condition A	LW / CW	kpsi	3,980 / 3,820
Hot Flexural Modulus (0.440") Condition E-1/150, T-150	LW / CW	kpsi	3,790 / 3,640
Tensile Strength (0.440") Condition A	LW / CW	psi	70,500 / 61,700

Hot Tensile Strength (0.440") Condition E-1/150, T-150	LW / CW	psi	67,500 / 40,800
Tensile Modulus (0.440") Condition A	LW / CW	kpsi	1,370 / 1,240
Izod Impact Strength (0.440") Condition E-48/50	LW / CW	ft-lb/in notched	46.0 / 46.0
Compressive Strength (0.440") Condition A	Flatwise	psi	95,500
Hot Compressive Strength (0.440") Condition E-1/150, T-150	Flatwise	psi	94,400
Compressive Modulus (0.440") Condition A	Flatwise	kpsi	765.7
Bond Strength (0.440") Condition A		lb	960
Condition D-48/50			770
Shear Strength (0.440")	Perpendicular	psi	30,700

<b>THERMAL &amp; ELECTRICAL PROPERTIES</b>	<b>UNITS</b>	<b>VALUE</b>
Temperature Index    Electrical / Mechanical	°C	210 / 150 <sup>1</sup>
Flammability Rating - U. L. 94 (0.440")	Class	V0
Breakdown Voltage (0.440") Condition A	kV	35.0
Condition D-48/50		6.2

<sup>1</sup> 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.

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".

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 information is most current.

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