

NP523

INTRODUCTORY TECHNICAL DATA BULLETIN

GRADE: NP523

NEMA GRADE: --

U. L. LISTED: N

DESCRIPTION: NP523 is a member of the *ShotBlocker*™ family of products. Being a high performance composite manufactured from AGY S-2 Glass® with a high-temperature phenolic resin system, NP523 was developed to comply with stringent Military requirements as a ballistic resistant material. NP523 complies with MIL-L-64154 and MIL-DTL-64154B, Class A, Code 1.

THICKNESS TESTED: 0.500"

TYPICAL PROPERTIES

| BALLISTIC PROPERTIES | | UNITS | VALUE |
|---|----------|---------|-----------------|
| V50 Ballistic Limit (0.500") | CAL30FSP | fps | 2621 |
| GENERAL PHYSICAL PROPERTIES | | UNITS | VALUE |
| Specific Gravity (0.500") | | - | 2.06 |
| Rockwell Hardness (0.500") | | M Scale | 98 |
| Moisture Absorption (0.500") Condition D _i -24/23 | | % | 1.4 |
| Flexural Strength (0.500") Condition A | LW / CW | psi | 26,500 / 24,300 |
| Hot Flex Strength (0.500") Condition E-1/150, T-150 | LW / CW | psi | 16,600 / 14,400 |
| Flexural Modulus (0.500") Condition A | LW / CW | kpsi | 4,440 / 4,060 |
| Hot Flexural Modulus (0.500") Condition E-1/150, T-150 | LW / CW | kpsi | 3,780 / 3,670 |
| Tensile Strength (0.500") Condition A | LW / CW | psi | 80,600 / 46,800 |

| | | | |
|---|---------------|---------------------|-----------------|
| Hot Tensile Strength (0.500") Condition E-1/150, T-150 | LW / CW | psi | 69,600 / XX,XXX |
| Tensile Modulus (0.500") Condition A | LW / CW | kpsi | 670 / 620 |
| Izod Impact Strength (0.500") Condition E-48/50 | LW / CW | ft-lb/in notched | 42.2 / 41.7 |
| Compressive Strength (0.500") Condition A | Flatwise | psi | 95,200 |
| Hot Compressive Strength (0.500") Condition E-1/150, T-150 | Flatwise | psi | 94,400 |
| Compressive Modulus (0.500") Condition A | Flatwise | kpsi | 746.2 |
| Bond Strength (0.500") Condition A | | lb | 810 |
| Condition D-48/50 | | | 590 |
| Shear Strength (0.500") | Perpendicular | psi | 28,200 |

| THERMAL & ELECTRICAL PROPERTIES | UNITS | VALUE |
|--|--------------|------------------------|
| Temperature Index Electrical / Mechanical | °C | 210 / 150 ¹ |
| Flammability Rating - U. L. 94 (0.500") | Class | V0 |
| Breakdown Voltage (0.500") Condition A | kV | 57.0 |
| Condition D-48/50 | | 0.0 |

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.

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, to determine if information is most current.

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