

NP424

TECHNICAL DATA BULLETIN

GRADE: NP424

NEMA GRADE: CEM – 1

U. L. LISTED: Y

DESCRIPTION: Composite material composed of woven glass fabric surfaces and paper core combined with epoxy resin. Primarily used in the printed circuit board industry. Provides excellent mechanical and electrical properties, and punches well up to .093".

THICKNESS TESTED: 0.062", 0.125" and 0.500".

TYPICAL PROPERTIES

| GENERAL PHYSICAL PROPERTIES | UNITS | VALUE |
|---|----------|-----------------------|
| Specific Gravity | - | Varies with thickness |
| Rockwell Hardness (.062") | M Scale | 102 |
| Moisture Absorption (.062") | % | .25 |
| Flexural Strength (.062") LW | psi | 48,000 |
| CW | | 40,000 |
| Flexural Modulus (.062" LW | kpsi | 2,500 |
| CW | | 2,100 |
| Tensile Strength (.125") LW | psi | 44,900 |
| CW | | 34,100 |
| Izod Impact Strength E-48/50 (.500") LW | ft-lb/in | 1.7 |
| CW | notched | 1.3 |
| Compressive Strength flatwise (.500") | psi | 50,000 |
| Bond Strength (.500") | lb | 1,400 |
| Shear Strength (perpendicular) (.062") | psi | 12,500 |

| THERMAL & ELECTRICAL PROPERTIES | UNITS | VALUE |
|---|---------------------------|--------------|
| Maximum Operating Temperature ¹ | °C | 130 |
| Coefficient of Thermal Expansion x-axis (.062") Y-axis | " / °C x 10 ⁻⁶ | 13 16 |
| Flammability Rating - U. L. 94 | Class | V-0 |
| Breakdown Voltage Condition - A (.062") D-48/50 | kV | 60 40 |
| Electric Strength Condition - A (.062") D-48/50 | V/mil | 675 400 |
| Permittivity (.062") Condition - D-24/23 | - | 4.6 |
| Dissipation Factor (.062") Condition -D-24/23 | - | .030 |
| Arc Resistance (.125") D-495 | sec | 121 |
| Comparative Tracking Index (.125") D3638 | - | 300 |

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".