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**TECHNICAL DATA SHEET**

# 416NMN27H2 - 416 Nomex® / PET / 416 Nomex® Class H 180°C Insulation

A flexible composite insulation composed of type 416 Nomex® meta-aramid paper and electrical grade PET film laminated with a high temperature structural adhesive system.

### PRODUCT ATTRIBUTES

- Excellent thermal stability and electrical properties
- High tear, tensile, and burst strength
- Excellent moisture and chemical resistance
- UL 1446 220°C and recognized insulation system, file E60273

### PRODUCT APPLICATIONS

- Flexible circuit materials
- Power distribution
- Heating elements
- Electrical cables

| REPRESENTATIVE PHYSICAL PROPERTIES                    |                  |             |
|---|------------------|-------------|
| PROPERTY  | VALUE            | TEST METHOD |
| NOMINAL THICKNESS, inches                             | 0.012            | ASTM D374   |
| <b>YIELD</b>  |                  |             |
| Square yards per pound                                | 0.26             |             |
| Pounds per Square Yards                               | 3.82             |             |
| <b>DIELECTRIC STRENGTH</b><br>(Volts - 2" electrodes) | 18,500           | ASTM D149   |
| <b>DIELECTRIC CONSTANT</b><br>(23°C, 50% RH, 60 Hz)   | 3.2              | ASTM D150   |
| <b>TENSILE STRENGTH</b> (psi)                         |                  |             |
| Machine Direction (MD)                                | 188              | ASTM D828   |
| Cross Machine Direction (XMD)                         | 188              |             |
| <b>GRAVES TEAR STRENGTH</b> (lbs)                     |                  |             |
| Machine Direction (MD)                                | 20               | ASTM D1004  |
| Cross Machine Direction (XMD)                         | 21               |             |
| <b>DISSIPATION FACTOR</b><br>(23°C, 50% RH, 60 Hz)    | 0.005            | ASTM D150   |
| <b>VOLUME RESISTIVITY</b> (Ohm-cm)<br>(23°C, 50% RH)  | 10 <sup>15</sup> | ASTM 257-66 |
| <b>SURFACE RESISTIVITY</b> (Ohm)<br>(23°C, 50% RH)    | 10 <sup>15</sup> | ASTM-257-66 |

### STORAGE

- Shelf life: one (1) year
- Store in a clean area free from exposure to excessive heat, moisture or direct sunlight (50°F to 80°F).

Product performance will vary in each application and is dependent upon composite construction. Alamotape does not guarantee the replication of this data by third parties. None of the data or statements contained herein is intended to warrant the performance of this product. Data is representative and not intended as a manufacturing specification.