



**ARLON**  
INNOVATIONS

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**TECHNICAL DATA SHEET**

# NKN535 - 410 Nomex® / Kapton® / 410 Nomex® Class R 220°C Insulation

A flexible composite insulation composed of type 410 Nomex® meta-aramid paper and Kapton® polyimide film laminated with a high temperature structural adhesive system. Polyimide films have extremely low off-gassing characteristics for use in aerospace and medical applications.

### 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
<b>NOMINAL THICKNESS</b> , inches	0.013	ASTM D374
<b>YIELD</b>		
Square Yards per Pound	2.78	
Pounds per Square Yard	0.36	
<b>DIELECTRIC STRENGTH</b> (Volts – 2" electrodes)	17,500	ASTM D149
<b>DIELECTRIC CONSTANT</b> (23°C, 50% RH, 60 Hz)	3.2	ASTM D150
<b>TENSILE STRENGTH</b> (psi)		
Machine Direction (MD)	180	ASTM D828
Cross Machine Direction (XMD)	145	
<b>GRAVES TEAR STRENGTH</b> (lbs)		
Machine Direction (MD)	12	ASTM D1004
Cross Machine Direction (XMD)	9	
<b>DISSIPATION FACTOR</b> (23°C, 50% RH, 60 Hz)	0.005	ASTM D150
<b>VOLUME RESISTIVITY</b> (Ohm-cm) (23°C, 50% RH)	10 <sup>15</sup>	ASTM 257-66
<b>SURFACE RESISTIVITY</b> (Ohm) (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. Arlon Innovations 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.*