



TECHNICAL DATA SHEET

Phenolic Coated Nomex® – 410X5PH1 (Single Sided) Class R 220°C Insulation – 410X5PH2 (Double Sided)

A flexible composite insulation composed of 5 mil 410 Nomex® aramid paper coated on one or both sides with Arlon Innovations Phenolic based thermosetting adhesive system. The thermosetting adhesive is applied to the Nomex® in b-stage form. Once b-staged, the product can be heated and pressed for full cure bonding to many substrates. The adhesive is tack-free at room temperature – no release liner is needed.

PRODUCT ATTRIBUTES

- Excellent thermal stability, electrical properties, and chemical resistance
- Extremely high adhesive bond strength
- High continuous temperature resistance
- RoHS and REACH compliant

REPRESENTATIVE PHYSICAL PROPERTIES		
PROPERTY	VALUE	TEST METHOD
NOMINAL THICKNESS (double coated)	0.007 inches	ASTM D374
YIELD:	Single Coat Double Coat	
Square yards per pound	3.920 3.37	
Pounds per square yard	0.255 0.297	
DIELECTRIC STRENGTH (2-inch diameter electrodes)	3000 Volts	ASTM D149
TENSILE STRENGTH:		
Machine Direction (MD)	89 lb/in	ASTM D828
Cross Machine Direction (XMD)	38 lb/in	
DIELECTRIC CONSTANT	3.0 (23°C, 50% RH, 60 Hz)	ASTM D150
180° PEEL ADHESION (stainless steel):		
Phenolic on Nomex	Exceeds strength of Nomex	ASTM D3330
Phenolic on 7 mil Al foil	> 30 lb/in	
LAMINATION PARAMETERS:		
Temperature	310°F	
Time	30 minutes	
Pressure	25 – 75 psi	
OPERATING TEMPERATURE	-40°C – 220°C	

Lamination Parameters are to be used as guidelines only. Samples should be tested for each application to insure proper usability. Parameters can be adjusted to match performance requirements, but curing temperature should never fall below 310°F.

STORAGE

- Shelf life: one (1) year from the date of shipment.
- 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.