

NOMEX® NMN Laminates

TECHNICAL DATA SHEET

Product Description

NOMEX® NMN laminates are triplex laminates constructed of calendered NOMEX® paper bonded to polyester film with a proprietary high temperature adhesive system. These laminates will not delaminate or blister at high temperatures.

The polyester film in these three-ply laminates contributes high dielectric strength, as well as good initial tear strength and tensile properties. The calendered NOMEX® paper provides long term thermal stability, as well as improved propagation tear strengths.

Application

These laminates are broadly used in the manufacture and remanufacture of motors and generators of many sizes and temperature classes. The most important applications are for slot liners, wedges and phase insulation in Class H motors and generators, as well as in large and specialty Class F motors. Motor manufacturers as well as motor repair facilities who remanufacture motors like the ability to standardize on NMN, and use just one insulation material for all motors.

There are a number of insulation systems recognized by Underwriters Laboratories (UL) which include these laminates for both Class F and Class H motors. Upon request, access to these insulation systems is available from DuPont.

Case Histories

Case Histories detailing the use of NMN laminates in motors and generators are available upon request. (Editor's note – WEG, Hitachi)

Product Data

Product	ASTM D374	Product Yield		ASTM D149	ASTM D257	ASTM D257	ASTM D882	ASTM D882	ASTM D1004	ASTM D1004
	Thickness Nominal (inches)	(yd ² /lb)	(lb/yd ²)	Dielectric Strength (volts)	Volume Resistivity (ohms-cm)	Surface Resistivity (ohms/square)	MD Tensile Strength (lb/in width)	XD Tensile Strength (lb/in width)	MD Tear Strength (lbs)	XD Tear Strength (lbs)
NMN 2-2-2	0.007	3.08	0.32	11,000	10 ¹⁵	10 ¹⁵	95	70	9	7
NMN 2-5-2	0.010	1.92	0.52	16,000	10 ¹⁵	10 ¹⁵	115	145	18	12
NMN 2-7½-2	0.012	1.49	0.67	18,000	10 ¹⁵	10 ¹⁵	200	180	25	20
NMN 2-10-2	0.012	1.12	0.89	20,000	10 ¹⁵	10 ¹⁵	220	200	28	24
NMN 3-3-3	0.010	2.04	0.49	13,000	10 ¹⁵	10 ¹⁵	170	110	17	10
NMN 3-5-3	0.012	1.64	0.61	17,000	10 ¹⁵	10 ¹⁵	175	150	26	18
NMN 3-7½-3	0.014	1.28	0.78	19,500	10 ¹⁵	10 ¹⁵	210	175	30	22
NMN 3-10-3	0.017	1.03	0.97	21,000	10 ¹⁵	10 ¹⁵	250	210	33	27
NMN 5-3-5	0.013	1.52	0.66	16,000	10 ¹⁵	10 ¹⁵	185	145	24	16
NMN 5-5-5	0.016	1.25	0.80	19,000	10 ¹⁵	10 ¹⁵	200	170	28	19
NMN 5-10-5	0.021	0.89	1.12	22,000	10 ¹⁵	10 ¹⁵	275	235	35	31



Available Forms

These products are available as 36-yard rolls of slit tape, from 1/2 inch in width, on 3-inch diameter cores. They are also available as full width trimmed (36 inch wide) rolls in 25, 50 and 100 yard length. Cut sheets, special core sizes and non-standard roll lengths are available upon request.

Specifications

The properties shown in this data sheet are typical values, and should not be used as specification limits. Contact DuPont for assistance in preparing specifications of these materials for your application.

Shelf Life

The shelf life of NOMEX® laminates is in excess of one year when they are stored at or below room temperature.

Safety Precautions

Material Safety Data Sheets (MSDS) describing the use of these products are available upon request from DuPont.

Availability

NOMEX® NMN Laminates are available from Von Roll Isola – USA, DuPont’s, authorized sales agent, or from your local authorized distributor. For the name of a local fabricator or distributor, or for more information on these products, contact DuPont.

USA

DuPont
Advanced Fibers Systems
5401 Jefferson Davis Highway
Richmond, VA 23234
Tel: (800) 453-8527 (804) 383-4400
Fax: (800) 787-7086 (804) 383-4132
e-mail: afscdt@usa.dupont.com

Von Roll Isola USA, Inc.
One West Campbell Road
Schenectady, NY 12306
Tel: (800) 654-7652 (518) 344-7237
Fax: (518) 344-7384
Email: something@vonroll-isola.com

CANADA

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Email: products@can.dupont.com

Website: www.dupont.com/nomex

Product safety information is available upon request. This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentations. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in actual end-use conditions, DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

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