

THERMAL CLASS = F = 155° C

1. General

MYOFLEX® N is an insulating material obtained by laminating a polyester (PET) film with one or two sheets of paper aromatic/polyamidyic fibers based calandered or uncalandered (Nomex®). A thermo-resistant resin ensures the perfect gluing.

Nomex® is product with a good mechanical resistance and excellent resistance to the high temperatures; PET film is very resistant to the tearing; the combination of the two materials enables MYOFLEX® N to get high performances when both mechanical or thermal stress occurs.

MYOFLEX® N is produced in several types and thicknesses; the most important ones (two sheets of Nomex®) are listed in the trade markbles at page 2.

2. Use

MYOFLEX® N is particularly suitable for insulation of electrical machines (such as motors and transformers) with a maximum operating temperature = 155° (class F). It works also in stronger conditions, like occasional thermal shocks.

Its main use is for slot insulation, for both manual and automatic insertion in low voltage rotating machines; it's also used as a phase separator on winding heads, as a slot insures (in greater thicknesses) and as an intermediate insulating layer in trasformers.

Furthermore, Nomex® can be easily cut, sheared, bent and formed.

3. Characteristics

The Thermal stability of Nomex® at the class F temperature (155°C) is more than 25,000 hours (according to IEEE n. 117; Evaluation of Systems of Insulating Materials for Random Wound AC Electric Machinery).

The other characteristics of MYOFLEX® N are listed on page 2 (only Myoflex with two sheets of Nomex®).

Values measured in compliance with IEC 626-2.

4 Conformity to the Norms

According to VDE 0530, MYOFLEX® N is a product in compliance with the norms (composite materials without cellulose having as an insulating material polyamidyic fibers).

Tested according to IEC 626-2.

Thermal class rated according to IEC 216; IEC 85.

5. Method of application

According to standard manual or automatic techniques.

6. Mode of supply

MYOFLEX® N is supplied as follows:

- in rolls of 50 or 100 kg and in jumbos of 120 ÷ 180 kg, 9m width, untrimmed wide, with inner core 3 inches (76mm) and diameter max. 400 mm.
- in tapes having different widths starting from 6 mm ø 38 mm.
- slitting tolerance $\pm 0,2$ mm.

(*) Du Pont trade mark.

MYOFLEX® 2N

TECHNICAL DATA

Nomex® Polyestere Film - Nomex®

MYOFLEX® 2N50C

NOMEX/PET/NOMEX		Mils µm	Tolerance	2/1/2 50/23/50	2/2/2 50/50/50	2/3/2 50/75/50	2/4/2 50/100/50	2/5/2 50/125/50	2/7/2 50/190/50	2/10/2 50/250/50	2/16/2 50/350/50
TOTAL	Thickness	mm	± 10%	0,13	0,15	0,19	0,22	0,24	0,31	0,37	0,47
	Weight	g /m²	± 12%	138,2	176	211	248	281	372	456	596
Yield		m/Kg	± 12%	7,24	5,68	4,74	4,07	3,56	2,69	2,19	1,68
Tensile strength md		N/cm	min	100	140	160	180	220	280	330	400
Elongation md		%	Min	17	20	20	20	20	22	22	25
Breakdown voltage		Kv	min	6	9	10	14	16	18	20	26

MYOFLEX® 2N80C

NOMEX/PET/NOMEX		Mils µm	Tolerance	3/1/3 80/23/80	3/2/3 80/50/80	3/3/3 80/75/80	3/4/3 80/100/80	3/5/3 80/125/80	3/7/3 80/190/80	3/10/3 80/250/80	3/12/3 80/300/80	3/14/3 80/350/80
TOTAL	Thickness	mm	± 10%	0,19	0,22	0,25	0,28	0,31	0,36	0,43	0,48	0,53
	Weight	g /m²	± 12%	187	225	260	285	330	421	505	575	645
Yield		m/Kg	± 12%	5,34	4,44	3,84	3,39	3,03	2,37	1,98	1,74	1,55
Tensile strength md		N/cm	min	180	200	240	280	280	360	420	470	550
Elongation md		%	Min	15	15	18	18	22	23	25	30	30
Breakdown voltage		Kv	min	6	10	12	14	16	18	20	23	28

MYOFLEX® 2N130C

NOMEX/PET/NOMEX		Mils µm	Tolerance	5/2/5 130/23/130	5/3/5 130/75/130	5/4/5 130/100/130	5/5/5 130/125/130
TOTAL	Thickness	mm	± 10%	0,33	0,35	0,38	0,40
	Weight	g /m²	± 12%	314	349	384	419
Yield		m/Kg	± 12%	3,18	2,86	2,60	2,38
Tensile strength md		N/cm	min	n.d.	n.d.	n.d.	n.d.
Elongation md		%	Min	n.d.	n.d.	n.d.	n.d.
Breakdown voltage		Kv	min	n.d.	n.d.	n.d.	n.d.

MYOFLEX® 2N130NC

NOMEX/PET/NOMEX		Mils µm	Tolerance	5/1/5 130/23/130	5/2/5 130/50/130	5/3/5 130/75/130	5/4/5 130/100/130
TOTAL	Thickness	mm	± 10%	0,30	0,33	0,35	0,38
	Weight	g /m²	± 12%	136	174	209	244
Actual thickness**		mm	± 10%	0,25	0,28	0,30	0,33
Yield		m/Kg	± 12%	7,34	5,74	4,78	4,10
Tensile strength md		N/cm	min	60,0	90,0	120,0	150,0
Elongation md		%	Min	17,0	17,0	17,0	17,0
Breakdown voltage		Kv	min	5,0	7,0	10,0	13,0

(**) Uncalandered NOMEX® is reduced in thickness during laminations

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