



# Flexible Composite Materials

## Nomex® Combined Flexible Materials

Materials	Unit	N416/M 3/1	N416/M 3/2	N416/M 3/3	N416/M 3/4	N416/M 3/5	N416/M 3/7	N416/M 3/10	N416/M 3/14
Total Thickness	mm	0.11	0.14	0.16	0.19	0.21	0.28	0.34	0.44
Thickness tolerance	%	± 10	± 10	± 10	± 10	± 10	± 10	± 10	± 10
Weight per unit area ±12%	g/m <sup>2</sup>	110	248	183	218	253	344	428	568
Yield ±12%	m <sup>2</sup> /kg	9.11	6.78	5.48	4.60	3.95	2.91	2.34	1;76
1 <sup>st</sup> layer :Nomex®		416	416	416	416	416	416	416	416
Nomex® thickness	mil (mm)	3 (0.076)	3 (0.076)	3 (0.076)	3 (0.076)	3 (0.076)	3 (0.076)	3 (0.076)	3 (0.076)
2 <sup>nd</sup> layer material		PET	PET	PET	PET	PET	PET	PET	PET
Film thickness	mil (mm)	1 (0.025)	2 (0.05)	3 (0.076)	4 (0.10)	5 (0.13)	7 (0.18)	10 (0.25)	14 (0.35)
Tensile strength M.D.	N/cm	100	120	140	180	200	260	310	360
Elongation M.D.	% (min)	15	17	17	20	20	20	22	22
Dielectric strength unfolded	kV	6	9	12	15	16	18	20	30

Testing Stanard : IEC 626-2 under *Conditioning* Standard atmosphere 23/50

**Insulation System : Class F (155C); H (180C); N (200C) and R (220C) in accordance with UL 1446 system available for above materials.**

FCM® is an insulating materials obtained by laminating a polyester (PET) film with one sheet of paper aromatic/polyamidic fibres based calandered or uncalandered (Nomex®). A thermo-resistant resin ensures the perfect bonding.

Nomex® 410, 416 & 464 with good mechanical resistance and an excellent resistance to the high temperatures; PET film is very resistant to the tearing; the combination of the two materials enables FCM to get high performances when both mechanical or thermal stress occurs.

FCM® is produced in several types and thicknesses; the most important ones (one sheet of Nomex®) are listed in the above table.

**Size available : 914mm (approx.) in width per roll.**

Remark : The above value, which has been determined by careful tests, provide only general information. P. Leo has implemented several programs to assure the highest quality and reliability of this product. However, no responsibility is assumed for its use.

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