FLEXIBLE SINGLE-LAYER INSULATIONS MADE OF MYLAR® A OR NOMEX®

KARL SCHUPP AG

CONDUCT – PROTECT – INSULATE



We offer these flexible insulations not only in original rolls of 880-1000 mm width, but also as rolls with individual wights or as molded and punched parts according to your dimensional specifications.

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Polyester films Mylar® and Hostaphan®

Properties

Mylar® and Hostaphan® are high-quality polyester films (PET, polyethylene terephthalate) that can be used in electrical insulation systems as voltage-resistant electrical insulation. Due to its excellent dielectric strength, PET film is suitable for use as slot closure and slot insulation.

Material:
Polyethylene terephthalate (PET) Mylar® A slightly cloudy (PFM) Hostaphan® RN slightly cloudy (PFHRN) Hostaphan® WN milky white (PFHWN)

Temperature class:
B (130°C)

Density:
1.395 g/cm3

Thickness dimensions:
0.023 mm - 0.500 mm thickness

Outer diameter approx. 240 mm with standard barrel length

Technical data Mylar® A: (technical data for Hostaphan® on request)

Article-No.		Nominal thickness [µm] ±10%	Breakdown voltage [kV]	Grammage [g/m2]	Yield [m2/kg]	Standard running length [m]
PFM023	*	23	4	32	31	1690
PFM036	*	36	5,5	50	20	1080
PFM050	*	50	7,7	70	14,0	780
PFM075	♦	75	10	105	9,6	520
PFM100	♦	100	11,75	140	7,2	390
PFM125	♦	125	13,5	175	5,7	310
PFM190	♦	190	17,7	265	3,8	200
PFM250	♦	250	19	350	2,9	160
PFM300	♦	300	19,5	418	2,4	130
PFM350	♦	350	20	480	2,1	110
PFM500	♦	500¨	32,5	670	1,5	80

♦ in wide rolls from stock ♦ no stock item

Delivery formats:	Standard rolls	900 - 1230 mm width
	Narrow rolls	from 4 mm width
	Roller diameter	240 - 250 mm
	Feathering	Depth 1- 4 mm/step 0.5 mm
Article-No.	Example: PFM190/022.5	
	PFM190	= Master number
	xxx.x	= 022.5 Width 22.5 mm

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Nomex® Aramid paper

Properties:

NOMEX® is a synthetic aromatic polyamide polymer (aramid), which is characterized by a particularly stable molecular structure. This results in the excellent dielectric, thermal, chemical and mechanical properties of NOMEX® and opens up a wide range of applications for NOMEX® Products. NOMEX® paper is manufactured from two forms of the aramid polymer, the fibrids (as binding particles) and the flakes in a paper manufacturing process (type 411). In a second step, the NOMEX® papers (types 410, 414, E56, 418) are highly compacted and cross-linked in a high-temperature calendering process.

Material	Thicknesses [mm]						
NOMEX® type 410 calendered standard version							
NOMEX® type 411 Uncalandered, soft, absorbent variant	---	---	--	0,18	0,25	---	0,38
NOMEX® type 414 Similar to type 410, more flexible, therefore more malleable with a more open surface and better absorbency compared to type 410	---	---	----	0,18	0,25	0,30	0,38
Material	Thicknesses [mm]						
NOMEX® type T993 Medium density, moldable, good absorbencyApplication:Production of winding cores and spacers in transformer construction	1,0	1,5	2,0	2,4	3,0	4,0	---
NOMEX® type T994 Highly compacted, mechanically high-strengthApplication:Spacers, strips, spacer rings in transformer construction, soldering pads, Ultrasonically welded strip mats	4,8	5,0	6,0	6,4	7,0	8,0	9,6

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Nomex® Aramid paper type 410

Properties:

Nomex® Type 410 has good mechanical toughness, flexibility and resilience and is an ideal surface insulating material, even at high temperatures. Nomex® Type 410 is characterized by a high dielectric strength even without treatment with impregnating agents. Due to its polymer structure, this material can also be used very well at low temperatures (down to -190°C). Nomex® is practically unaffected by most solvents and is highly resistant to acids and alkalis. It is compatible with all types of resins, paints and adhesives as well as transformer fluids, lubricating oils and coolants. Nomex® has good tear and abrasion resistance. Even at considerably higher temperatures than 180°C, this material still exhibits usable values. It is flame-retardant and UL-approved as an insulating material for a temperature range of up to 220°C.

Material:

Nomex® Aramid Paper Type 410 is a calendered electrical insulation paper. It is made of a two-component polyamide polymer.

with UL recognition

Temperature range:

220 °C

Dimensions:

Article-No.		Nominal thickness	Tensile strength		Elongation		Tear resistance		Tear resistance		Dielectric constant (at 60Hz and 23°C)	Loss factor	Dielectric strength	Weight per unit area	Yield
		[µm]	[N/cm]		[%]		[N]		[N]				[kV/mm]	[g/m2]	[m2/kg]
			length wise	transverse	length wise	transverse	length wise	transverse	length wise	transverse					
NO410/05	*	50	39	18	9	6	0,8	1,6	11	6	1,6	0,004	17	41	24.6
NO410/08	*	80	65	32	11	8	1,2	2,3	16	8	1,6	0,005	22	64	15.5
NO410/13	*	130	144	68	16	13	2,3	5,1	32	16	2,4	0,006	26	115	8.7
NO410/18	*	180	228	116	19	15	3,6	7,1	49	25	2,7	0,006	33	173	5.8
NO410/25	*	250	306	152	20	16	5,1	9,9	71	43	2,7	0,006	32	248	4.0
NO410/30	*	300	385	203	23	19	6,5	12,3	93	51	2,9	0,007	33	309	3.2
NO410/38	*	380	482	263	21	17	8,1	14,7	116	71	3,2	0,007	32	393	2.5
NO410/51	*	510	657	376	22	17	11,5	19,6	162	110	3,4	0,007	31	546	1.8
NO410/61	*	610	823	534	21	15	---	---	187	146	3,7	0,007	32	695	1.4
NO410/76	*	760	910	613	20	16	---	---	240	191	3,7	0,007	27	841	1.2

* no stock item

Delivery formats:

Standard rolls 610 or 914 mm wide
Narrow rolls from 6 mm wide

Item number:

Example: NO410/05/xxx.x NO410/05 = master number xxx.x = 022.5 = width 22.5 mm

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