

Croyfilm Polyester Film 36-350

ABOUT THIS PRODUCT

Polyester Film is a biaxially orientated film made of polyethylene terephthalate (PET) and characterized by outstanding physical properties.



Films for Industrial applications

- Coating
- Laminating
- Metallizing
- Printing

Release

- Transfer film
- Film for production of cast films
- Film for production of GRP-Products

Decorative films

Further applications

- Gaskets and gasket inserts
- Membranes
- Tapes measures
- Soundproofing and thermal insulation in combination with suitable materials
- Drum skins
- Carrier film in veneer-and furniture presses

Stiffening

- Collar stiffeners

Building insulation

Gloss laminations

Adhesive tapes

Adhesive films

Insulation tapes

Electrical insulation

- Flexible printed circuits
- Transformers and coils

Reprography

- Base for colour printing
- Carrier film for flexible printing plates
- Drafting film/engineering

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TECHNICAL TABLE

Property	Thickness	Units	Value		Test Method	Test Conditions
			MD*	TD*		
	µm					
Mechanical						
Tensile strength	36-75	N/mm ²	210	260	ISO 527-1 and ISO 527-3 Sample type 2	Test speed 100%min.:23°C, 50% r.h.
	100-125		180	230		
	190-350		150	200		
Elongation at break	36-75	%	150	110	ISO 527-1 and ISO 527-3 Sample type 2	Test speed 100%min.:23°C, 50% r.h.
	100-125		185	120		
	190-350		200	140		
Youngs's Modulus	36-75	N/mm ²	4000	5200	ISO 527-1 AND ISO 527-3 Sample type 2	Test speed 1%min.:23°C, 50% r.h.
	100-125		4100	4800		
	190-350		3600	4300		
F5-value (stress to obtain 5% elongation)	36-350	N/mm ²	105	105	ISO 527-1 AND ISO 527-3 Sample type 2	Test speed 100%min.:23°C, 50% r.h.
Thermal						
Shrinkage	36-190	%	1.0	0.3	DIN 40634	150°C, 15min.
	250-350		1.0	1.0		
Optical						
Haze	36	%	9		ASTM-D 1003-61 method A	Enlarged measurement angle
	50		13			
	75		15			
	100		18			
	125		22			
	190		25			
	250		28			
	350		30			

Electrical						
Dielectric strength	36/190	kV/mm	510/420 290/150 200/135		DIN 40634 or VDE 0345 in air	23°C, DC 23°C, 50 Hz 150°C, 50 Hz
Dielectric dissipation factor (tano)	36-350	-	0.0020 0.0052 0.0210 0.0060 0.0060 0.0048		DIN 40634 or VDE 0345	23°C, 50 Hz 23°C, 1 kHz 23°C, 1 MHz 23°C, 240 MHz 23°C, 9300 MHz 150°X, 50 Hz

Dielectric dissipation factor (tano)	36-350	-	0.0020 0.0052 0.0210 0.0060 0.0060 0.0048		DIN 40634 or VDE 0345	23°C, 50 Hz 23°C, 1 kHz 23°C, 1 MHz 23°C, 240 MHz 23°C, 9300 MHz 150°X, 50 Hz
Volume resistivity	36	$\Omega \times \text{cm}$	$\gt 10^{17}$ $\gt 10^{11}$		DIN 40634 or VDE 0345	23°C, DC 150°C, DC
Surface resistivity	36	Ω	$\gt 5 \times 10^{14}$		DIN 53482 or VDE 0303/ part 3	23°C, 25% r.h. 23°C, 50% r.h. 150°C, 75% r.h.
Dielectric constant	36-350	-	3.3 3.3 3.2 2.9 2.9 3.6		DIN 40634 or VDE 0345 in air	23°C, 50 Hz, 23°C, 1 kHz 23°C, 1 MHz 23°C, 240 MHz 23°C, 9300 MHz 150°C, 50 Hz

Conductivity of aqueous extract	36-350	$\mu\text{S/cm}$	2		DIN 40634 or VDE 0345	1kHz
Water absorption (compared to dry state)	36-350	%	0.5		ASTM-D 570	4 days in water at 23°C
Frigen extract	190	%	0.05		DIN 8944	Cold extraction
Trichloroethylene-extract	190	%	0.2		DIN 8943	Extracted in Soxhalet apparatus for 2h. Boiled down for 15h at 105°C.

Barrier					
Air	36	cm ³ /m ² x d x bar	20	DIN 53380	23°C, 0% r.h.
Oxygen		cm ³ /m ² x d x bar	50	DIN 53380	23°C, 50% r.h.
Water vapour		g/m ² x d	5	DIN 53122	23°C, 85% r.h.
Nitrogen		cm ³ /m ² x d x bar	12	DIN 53380	23°C, 0% r.h.
Carbon dioxide		cm ³ /m ² x d x bar	180	DIN 53380	23°C, 0% r.h.

MD = Machine direction, TD = Transverse direction

Thickness	Thickness range	Yield		Roll length	Roll diameter	Roll length	Roll diameter
		g/m ²	m ² /kg				
µm	µm			m	mm	m	mm
36	+ 2.0	50	20	4000	465	8 000	635
50	+ 2.5	70	14	3 200	485	6 400	670
75	+3.5	105	9.6	2 000	475	4 000	650
100	+ 5.0	140	7.2	1 600	485	3 200	670
125	+ 6.5	175	5.7	1 280	485	2 560	670
190	+ 10	266	3.8	800	475	1 600	650
250	+ 12	350	2.9	600	475	1 200	650
350	+ 14	490	2.0	440	480	880	655

Polyester film is permitted for food contact according to the current version of EC Directive 2002/72/EC and FDA regulation 21 CFR 177.1630 under the conditions set out in our current Declaration of Compliance. Before using Polyester Film in a food contact article, please request this Declaration of Compliance.

This data sheet reflects our state of knowledge at the time this was prepared. The purpose is to provide an overview of the characteristics of our products and their potential uses