

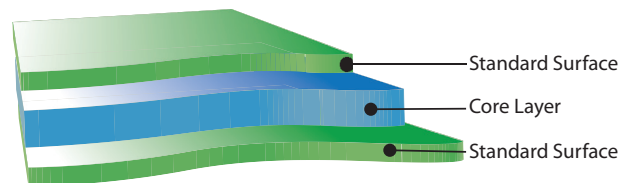


## Hostaphan® PCR PR3F

### Very glossy, transparent polyester film containing 30% of post consumer recycled (PCR) polyester

Hostaphan® PCR PR3F is a highly transparent, biaxially oriented coextruded film made of polyethylene terephthalate (PET). 30 % of the weight consists of post consumer recycled (PCR) polyester. The PCR material is added to the core layer of the film only. The cover layers are made of 100 % virgin material.

### Layer structure of Hostaphan® PCR PR3F



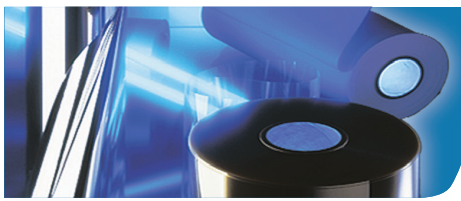
### Typical properties

Property	Thickness $\mu\text{m}$	Units	Value		Test Method	Test Conditions
			MD	TD		
<b>MECHANICAL</b>						
Tensile strength	12-23	N/mm <sup>2</sup>	260	260	ISO 527-1 and ISO 527-3 Sample type 2	Test speed 100 %/min.; 23 °C, 50 % r.h.
Elongation at break	12-23	%	120	120	ISO 527-1 and ISO 527-3 Sample type 2	Test speed 100 %/min.; 23 °C, 50 % r.h.
Young's Modulus	12-23	N/mm <sup>2</sup>	4500	5000	ISO 527-1 and ISO 527-3 Sample type 2	Test speed 1 %/min.; 23 °C, 50 % r.h.
F5-value (stress to obtain 5% elongation)	12-23	N/mm <sup>2</sup>	110	105	ISO 527-1 and ISO 527-3 Sample type 2	Test speed 100 %/min.; 23 °C, 50 % r.h.
<b>THERMAL</b>						
Shrinkage	12-23	%	1.5	0.2	DIN 40634	150°C, 15 min.
<b>OPTICAL</b>						
Transparency	12-23	%	90		ASTM-D 1003-61 method A	-
Haze	12-23	%	3		ASTM-D 1003-61 method A	Enlarged measurement angle
<b>SURFACE</b>						
Coefficient of friction (static)	12-23	-	0.4		DIN53375 or ASTM-D 1894	-



Property	Thickness $\mu\text{m}$	Units	Value		Test Method	Test Conditions
			MD	TD		
Surface tension	12-23	mN/m (dyne/cm)	43		DIN 53364	Test inks
<b>PHYSICAL/CHEMICAL</b>						
Density	12-23	$\text{g/cm}^3$	1.4		ASTM-D 1505-68 method C	23°C
Conductivity of aqueous extract	12-23	$\mu\text{S/cm}$	2.0		DIN 40634 or VDE 0345	1kHz
Water absorption	12-23	%	0.5		ASTM-D 570	4 days in water at 23°C
<b>ELECTRICAL</b>						
Permittivity	12-23	-	3.3 3.3 3.2 2.9 2.9 3.6	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°C, 50 Hz	
Break down voltage	12 19 23	kV	4.5 6.5 7.5	DIN 40634 or VDE 0345 in air	23°C, 50 Hz,	
Dielectric dissipa- tion factor ( $\tan\delta$ )	12-23	-	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°C, 50 Hz	
Volume resistivity	12-23	$\Omega \times \text{cm}$	$> 10^{17}$ $> 10^{11}$	DIN 40634 or VDE 0345	23°C, DC 150°C, DC	
Surface resistivity	12-23	$\Omega$	$> 5 \times 10^{14}$ $> 5 \times 10^{14}$ $> 10^{11}$	DIN 53482 or VDE 0303/part 3	23°C, 25% r.h. 23°C, 50% r.h. 150°C, 75% r.h.	
<b>BARRIER</b>						
Air	12	$\text{cm}^3/\text{m}^2 \times \text{d} \times \text{bar}$	60		DIN 53380	23°C, 0% r.h.
Oxygen	12	$\text{cm}^3/\text{m}^2 \times \text{d} \times \text{bar}$	110		DIN 53380	23°C, 50% r.h.
Water vapour	12	$\text{g}/\text{m}^2 \times \text{d}$	16		DIN 53122	23°C, 85% r.h.
Nitrogen	12	$\text{cm}^3/\text{m}^2 \times \text{d} \times \text{bar}$	35		DIN 53380	23°C, 0% r.h.
Carbon dioxide	12	$\text{cm}^3/\text{m}^2 \times \text{d} \times \text{bar}$	500		DIN 53380	23°C, 0% r.h.

MD = Machine direction, TD = Transverse direction



# HOSTAPHAN®

## Delivery program Hostaphan® PCR PR3F

Thickness <i>μm</i>	Yield		Roll length <i>m</i>	Roll- diameter <i>mm</i>	Roll length <i>m</i>	Roll- diameter <i>mm</i>
	<i>g/m<sup>2</sup></i>	<i>m<sup>2</sup>/kg</i>				
12	17	60	24 000	650	48 000	900
15	21	48	11 200	490	33 600	830
19	27	38	9 200	500	18 400	700
23	32	31	9 600	550	19 200	800

Other roll lengths on request. Core diameter: 152.4 mm (6")

Hostaphan® PCR PR3F is suitable for a wide range of applications for packaging and industrial uses.

Hostaphan® PCR PR3F is also available with corona treatment or chemically treated for improved adhesion of evaporated metal layers, printing inks or coatings.

This Hostaphan® film is permitted for food contact according to the current version of EC Directive 1935/2004 and 10/2011 as well as FDA regulation 21 CFR 177.1630 under the conditions set out in our current Declaration of Compliance. Please note that Hostaphan® PCR is intended for the manufacture of materials and articles for contact with all types of foodstuffs for hotfill and/or long term storage at or below room temperature. Before using this Hostaphan® film in a food contact article, please request the 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. The values given reflect the typical characteristics of the film. They are not specification limits. They are neither a guarantee of specific properties nor the suitability of products in specific applications. The user must observe industrial property rights, such as patents or trademarks. The quality of our products is covered by the terms of the General Conditions of Sale of MITSUBISHI POLYESTER FILM GmbH.

Edition 07/23