



Makrofol ID 4-4

PC films, card applications / Transparent

Makrofol ID 4-4 is a special transparent Polycarbonate Film for identity-, credit- and health insurance cards. It comprises both outstanding durability and resistance to thermal and mechanical stress. Surface: Fine matte/Fine matte It is available in the standard thickness of 100 µm, other thicknesses on request. Available as roll and sheet

ISO Shortname

Property	Test Condition	Unit	Standard	Value
Rheological properties				
Shrinkage, parallel	130 °C; 1 h	%	IEC 60674	< 0.4
Shrinkage, across	130 °C; 1 h	%	IEC 60674	< 0.4
Mechanical properties (23 °C/50 % r. h.)				
Tensile modulus		MPa	ISO 527-1,-3	>= 2200
C Stress at break, parallel		MPa	ISO 527-1,-3	>= 70
C Stress at break, across		MPa	ISO 527-1,-3	>= 70
Strain at break		%	ISO 527-1,-3	140
Thermal properties				
Coefficient of linear thermal expansion, parallel	20 to 120 °C	10 ⁻⁶ /K	DIN 53752	70
Coefficient of linear thermal expansion, transverse	20 to 120 °C	10 ⁻⁶ /K	DIN 53752	70
Burning rate (US-FMVSS)		mm/min	ISO 3795	<=100
Electrical properties (23 °C/50 % r. h.)				
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	100
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	3.0
Electrolytic corrosion		Rating	IEC 60426	A1
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	0.2
C Density		kg/m ³	ISO 1183	1200
C Gloss	60 °; Top Side	-	ISO 2813	>= 25
C Gloss	60 °; Reverse Side	-	ISO 2813	>= 25
Material specific properties				
Luminous transmittance (clear transparent materials)	D65	%	ISO 13468-2	> 80

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.



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Page 2 of 2 pages

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ISO Datasheet