

Makrofol[®] LM297 H-M 040007

Description and Application Information

Makrofol[®] LM297 H-M 040007 is a lens type light shaping film that has especially been designed for LCD backlight applications. It is an extrusion film with anti-dust feature based on Makrolon[®] polycarbonate resin from Covestro. Its unique polynomial structured surface (H-surface) ensures high-end performance regarding homogenization, transmittance and processability. The surface structure of the reverse side is fine matte (M-surface).

Makrofol[®] LM297 H-M 040007 is available in standard thicknesses of 130, 180 and 280 microns. Other thicknesses on request.

Typical applications are televisions, monitors and backlight displays.

Preliminary guide data

General properties			
Property	Value	Unit of measurement	Method
Density	1,2	g/cm ³	ISO 1183, 20°C, Method C
Thickness	130, 180, 280	µm	acc. to ISO 4593, 23°C
Gloss		Digits	ISO 2813, Angle 60°, backprinted black
M-surface	10 to 90		
Roughness R3z		µm	acc. to ISO 4287/88, Lm12,5mm, lc 2,5mm, Average over 3-5 measurements
M-surface	< 4		

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Optical properties			
Property	Value	Unit of measurement	Method
Luminous transmittance		%	ISO 13468-2
130 µm, H-surface	85		
180 µm, H-surface	90		
280 µm, H-surface	91		
450 µm, H-surface	88		
Haze		%	ASTM D1003
130 µm, H-surface	99		
180 µm, H-surface	98		
280 µm, H-surface	96		
450 µm, H-surface	95		
Reflectance		%	ASTM E 1331
130 µm, H-surface	13		
180 µm, H-surface	9		
280 µm, H-surface	9		
450 µm, H-surface	9		
Thermal properties			
Property	Value	Unit of measurement	Method
Relative temperature index	80	°C	UL 746 B
Electrical properties			
Property	Value	Unit of measurement	Method
Surface resistivity	10 ¹¹ to 10 ¹⁴	Ohm	following DIN IEC 60093
Other properties			
Property	Value	Unit of measurement	Method
Water absorption	approx. 0,2	%	following ISO 62

Labeling and REACH applications

This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet.

Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet.



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(1) Please see the "Guidance on Use of Covestro Products in a Medical Application" document.

(2) As defined in Commission Regulation (EU) 1935/2004.

This is a trial product. Further information, including amended or supplementary data on hazards associated with its use, may be compiled in the future. For this reason no assurances are given as to type conformity, processability, long-term performance characteristics or other production or application parameters. Therefore, the purchaser/user uses the product entirely at his own risk without having been given any warranty or guarantee and agrees that the supplier shall not be liable for any damage, of whatever nature, arising out of such use. Commercialisation and continued supply of this material are not assured. Its supply may be discontinued at any time.

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