



# Makrofol<sup>®</sup> LM 905 160009

## Description and Application Information

Makrofol<sup>®</sup> LM 905 160009 (formerly Makrofol<sup>®</sup> DP 9005) is an extruded polycarbonate film filled with a light-scattering agent. It displays a smooth homogenous illumination of the front side of a backlit part even if a point source light is applied.

Makrofol<sup>®</sup> LM 905 160009 is available in standard thicknesses of 300 microns and 500 microns.

Typical applications are automotive instrument panels and backlight displays.

## Preliminary guide data

### General properties

Property	Value	Unit of measurement	Method
Density	1.2	g/cm <sup>3</sup>	ISO 1183, 20°C, Method C
Gloss		Digits	ISO 2813, Angle 60°, backprinted black
Top-surface	≥ 80		
Back-surface	< 6		
Roughness R3z		µm	acc. to ISO 4587/88, Lm12,5mm, lc 2,5mm, Average over 3-5 measurements
Top-surface	< 0.5		
Back-surface	< 11		

### Optical properties

Property	Value	Unit of measurement	Method
Light transmission		%	ISO 13468-2
300 µm, Back-surface	81		
300 µm, Top-surface	78		
500 µm, Back-surface	73		
500 µm, Top-surface	73		
Haze		%	ASTM D1003
300 µm, Back-surface	100		
300 µm, Top-surface	100		
500 µm, Back-surface	100		
500 µm, Top-surface	100		
Half-power angle		Degree	following DIN 5036
300 µm, Top-surface	29		
500 µm, Top-surface	41		



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Mechanical properties			
Property	Value	Unit of measurement	Method
Stress at break		MPa	ISO 527-1,-3
machine direction	≥ 70		
transverse direction	≥ 70		
Strain at break		%	ISO 527-1,-3
machine direction	≥ 115		
transverse direction	≥ 115		
Tensile Modulus		MPa	ISO 527-1,-3
machine direction	≥ 2400		
transverse direction	≥ 2300		
Thermal properties			
Property	Value	Unit of measurement	Method
Operating temperature range	-30 to 145	°C	
Melt temperature	300	°C	
Electrical properties			
Property	Value	Unit of measurement	Method
Surface resistivity	10 <sup>16</sup>	Ohm	following DIN IEC 60093
Other properties			
Property	Value	Unit of measurement	Method
Water absorption	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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