

# Makrofol® SR906 1-1 040009

## Description and Application Information

Makrofol® SR906 1-1 040009 is a clear transparent extruded polycarbonate film with an acrylic functional layer. The film comprises a high UV protection additive. The acrylic on the top surface offers improving scratch resistance while the polycarbonate back surface provides excellent printability.

The combination of the acrylic functional layer and the polycarbonate layer of Makrofol® SR906 040009 overcomes the low impact resistance of PMMA films. The UV protection benefits a low change in the yellowness index even if passing the weathering test. Additionally, Makrofol® SR906 1-1 040009 film has good heat resistance and excellent impact strength.

Makrofol® SR906 1-1 040009 is especially designed for the Film Insert Moulding (FIM) process. Excellent formability by High Pressure Forming (HPF) as well as thermal forming processes are possible. Due to the acrylic functional layer Makrofol® SR906 040009 can be used as well for injection overmolding with Acrylic or backmolding with Polycarbonate giving high film/resin adhesion even passing typical climate test conditions for automotive interior parts.

Makrofol® SR906 1-1 040009 has been designed for applications in the automotive interior, IT and EE sector. It is available in the standard thickness range of 175, 250, 375 and 635 µm. Surface structure is gloss-gloss.

Makrofol® SR906 040009 is supplied with the protective masking film on both sides.

## 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			ISO 2813, Angle 60°, backprinted black
1 - surface	≥ 85	digits	
Roughness R3z			following ISO 4287/88
1 - surface	≤ 0.5	µm	
Pencil hardness	≥ F		ASTM D 3363, 750g
Taber abrasion			ASTM D 1044, ASTM D 1003
delta Haze after 500 cycles (top side)	≤ 30	%	

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## Optical properties

Property	Value	Unit of measurement	Method
Light transmission	≥ 89	%	acc. to ISO 13468-2
Yellowness index	< 1		ASTM D1003
Haze			ASTM D 1003
1 - surface	≤ 0.5		
UV resistance			acc. to DIN ISO 4892-A D 65/10°
(YI after weathering test, 1000 hours) 1.1			

## Mechanical properties

Property	Value	Unit of measurement	Method
Stress at break	> 50	MPa	ISO 527-1,3 23°C
Strain at break	> 5	%	ISO 527-1,3 23°C
Tensile modulus	> 2200	MPa	ISO 527-1,3 23°C

\* These values provide general information and are not part of the product specification.

## 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.

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page 3 of 3

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