

# Makrofol® DE 1-1 000000

## Description and Application Information

Makrofol® DE 1-1 000000 is an extrusion film based on Makrolon, the High Tech Polycarbonate made by Covestro. It comprises excellent transparency combined with high optical quality.

The surface structure of Makrofol® DE 1-1 000000 is both sides gloss; both sides are masked with a protective masking as a standard.

It is available in various standard thicknesses from 125 microns to 1000 microns, other thicknesses on request.

Typical applications are name plates, panels and medical packaging.

## Guide data\*

<b>General properties</b>			
<b>Property</b>	<b>Value</b>	<b>Unit of measurement</b>	<b>Method</b>
Density	1,2	g/cm <sup>3</sup>	ISO 1183, 20°C method C
Gloss, 60° top side	≥ 99	Digits	ISO 2813
Gloss, 60° reverse side	≥ 99	Digits	ISO 2813
Roughness R3z, top side	≤ 0,5	µm	following ISO 4287/88
Roughness R3z, reverse side	≤ 0,5	µm	following ISO 4287/88
<b>Mechanical properties</b>			
<b>Property</b>	<b>Value</b>	<b>Unit of measurement</b>	<b>Method</b>
Tensile Modulus	≥ 2200	MPa	ISO 527-1,-3
Stress at break, parallel	≥ 70	MPa	ISO 527-1,-3
Stress at break, across	≥ 70	MPa	ISO 527-1,-3
Strain at break, parallel	150	%	ISO 527-1,-3
<b>Thermal properties</b>			
<b>Property</b>	<b>Value</b>	<b>Unit of measurement</b>	<b>Method</b>
Coefficient of linear thermal expansion, parallel 20 to 120°C	70	10 <sup>-6</sup> /K	following DIN 53752
Coefficient of linear thermal expansion, across 20 to 120°C	70	10 <sup>-6</sup> /K	following DIN 53752
Shrinkage, parallel 130°C, 1 h	< 0,4	%	following IEC 60674-2
Shrinkage, across 130°C, 1 h	< 0,4	%	following IEC 60674-2
<b>Burning behavior</b>			
<b>Property</b>	<b>Value</b>	<b>Unit of measurement</b>	<b>Method</b>
Burning rate (FMVSS 302)	≤ 100	mm/min	ISO 3795



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Optical properties			
Property	Value	Unit of measurement	Method
Light transmittance	> 80	%	ISO 13468-2, following DIN 5036

  

Other properties			
Property	Value	Unit of measurement	Method
Water absorption (saturation)	0,2	%	following ISO 62

\* 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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