

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*

General properties

Property	Value	Unit of measurement	Method
Density	1,2	g/cm ³	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

Mechanical properties

Property	Value	Unit of measurement	Method
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

Thermal properties

Property	Value	Unit of measurement	Method
Coefficient of linear thermal expansion, parallel 20 to 120°C	70	10 ⁻⁶ /K	following DIN 53752
Coefficient of linear thermal expansion, across 20 to 120°C	70	10 ⁻⁶ /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

Burning behavior

Property	Value	Unit of measurement	Method
Burning rate (FMVSS 302)	≤ 100	mm/min	ISO 3795

Makrofol® DE 1-1 000000

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.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

Editor: CAS Specialty Films
Covestro AG
Kaiser-Wilhelm-Allee 60
D-51373 Leverkusen
www.films.covestro.com
films@covestro.com

page 2 of 2

Edition 2013-07-22

Replaces edition dated 2012-02-23