

Makrofol® UV503 1-4 060051

Description and Application Information

Makrofol® UV503 1-4 060051 is an extrusion film based on tested and AMECA listed Makrolon AL polycarbonate resin.

Makrofol® UV503 1-4 060051 comprises all of the well known advantages of polycarbonate, such as excellent mechanical and optical properties with high precision forming.

The surface combination of is one side gloss - one side very fine matte. It is available in standard thicknesses of 375 and 500 microns. Other thicknesses on request.

It is typically used for exterior automotive lighting applications.

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	98 to 106	Digits	ISO 4593
Gloss, 60° reverse side	0,1 to 6	Digits	ISO 4593
Roughness R3z, top side	≤ 0,5	µm	acc. to ISO 4287/4288
Roughness R3z, reverse side	3 to 11	µm	acc. to ISO 4287/4288
Thermal properties			
Property	Value	Unit of measurement	Method
Shrinkage, parallel 130°C, 1 h	≤ 0,3	%	following IEC 60674-2
Shrinkage, across 130°C, 1 h	≤ 0,3	%	following IEC 60674-2
Optical properties			
Property	Value	Unit of measurement	Method
Birefringence	≤ 45	nm	Q04.4A
Light transmittance	> 80	%	ISO 13468-2, following DIN 5036
Other properties			
Property	Value	Unit of measurement	Method
Glass transition temperature	≥ 140	°C	ISO 11357-1,-2

* 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.



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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.

This product is not designated for the manufacture of a medical device (1) or of intermediate products for medical devices. This product is also not designated for Food Contact (2), including drinking water, or cosmetic applications. If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, for Food Contact products or cosmetic applications Covestro must be contacted in advance to provide its agreement to sell such product for such purpose. Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for Food Contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro.

(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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