

Makrofol® DE 1-4 900029

Description and Application Information

Makrofol® DE 1-4 900029 is an opaque, black colored extrusion film based on Makrolon Polycarbonate. It comprises all of the well known advantages of Polycarbonate such as excellent mechanical properties.

The surface combination of Makrofol® DE 1-4 900029 is onesided gloss (1), onesided very fine matte (4).

It stands out due to its good printing quality and formability. It is suitable for High Pressure Forming process (HPF). Makrofol® DE 1-4 900029 is available in various standard thicknesses from 100 to 500 µm.

Guide data*

General properties			
Property	Value	Unit of measurement	Method
Density	1,2	g/cm ³	ISO 1183, 20°C method C
Thickness	100 - 500	µm	ISO 4593
Gloss, 60° 1-side	≥ 99	Digits	ISO 2813
Gloss, 60° 4-side	≤ 7	Digits	ISO 2813
Roughness R3z 1-side	≤ 0,5	µm	following ISO 4287/88
Roughness R3z 4-side	≤ 11	µm	following ISO 4287/88
Mechanical properties			
Property	Value	Unit of measurement	Method
Tensile Modulus	≥ 2000	MPa	ISO 527-1,-3
Stress at break, parallel	≥ 60	MPa	ISO 527-1,-3
Strain at break, parallel	≥ 100	%	ISO 527-1,-3
Thermal properties			
Property	Value	Unit of measurement	Method
Shrinkage 130°C, 1 h < 250 µm	≤ 0,5	%	following IEC 60674-2
≥ 250 µm	≤ 0,3		

* 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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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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