

# Makrofol<sup>®</sup> DE 1-4 011267

## Description and Application Information

Makrofol<sup>®</sup> DE 1-4 011267 is a translucent white colored extrusion film based on Makrolon Polycarbonate. It comprises all of the well known advantages of Polycarbonate such as excellent mechanical and optical properties.

The surface combination of Makrofol<sup>®</sup> DE 1-4 011267 is gloss/very fine matte. It stands out due to its good printing quality and formability. It is suitable for High Pressure Forming process (HPF) and Film-Insert-Molding process (FIM).. Makrofol<sup>®</sup> DE 1-4 011267 is available in standard thickness of 300 µm. Typical applications are front panels, labels and control elements of electronic devices (white goods).

## Guide data\*

| General properties             |        |                     |                         |
|--------------------------------|--------|---------------------|-------------------------|
| Property                       | Value  | Unit of measurement | Method                  |
| Density                        | 1,2    | g/cm <sup>3</sup>   | ISO 1183, 20°C method C |
| Thickness                      | 300    | µm                  | ISO 4593                |
| Gloss, 60° 1-side              | ≥ 99   | Digits              | ISO 2813                |
| Gloss, 60° 4-side              | ≤ 12   | 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            |
| Optical properties             |        |                     |                         |
| Property                       | Value  | Unit of measurement | Method                  |
| Luminous transmittance         | 42,7   | %                   | ISO 13468-2             |
| Half power angle               | 55     | degree              | following DIN 5036      |
| Thermal properties             |        |                     |                         |
| Property                       | Value  | Unit of measurement | Method                  |
| Shrinkage, parallel 130°C, 1 h | ≤ 0,5  | %                   | following IEC 60674-2   |

\* 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.

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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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