



MAKROFOL[®] FR 7-2 000000

Polycarbonate Film

Description and Application

Makrofol FR 7-2 000000 is a clear extrusion film based on Makrolon[®] polycarbonate. The glare free and scratch resistant film has been developed to be highly flame retardant and carries a UL 94 V-0 rating. Typical applications are trade show displays, light diffusion, spacers and other applications requiring a UL 94 V-0 rating.

Makrofol FR 7-2 000000 is available in various standard thicknesses from 0.010" to 0.020" (250 microns to 500 microns). Other thicknesses are available on request. The surface combination of Makrofol FR 7-2 000000 is one side velvet and one side very fine matte. As with any product, use of Makrofol FR 7-2 000000 in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.

Typical Properties*

Property	Test Method	Unit	Value
General			
Specific Gravity	ASTM D 792		1.30
Conversion Factor		ft ² /lb·mil m ² /kg·mm	148 0.769
Gloss 60° top side, black inked second surface	ASTM D 2457	gloss unit	3 to 6
Gloss 60° reverse side	ISO 2813	gloss unit	--
Roughness, R3z, top side	ISO 4287/88	µm	16 to 23
Roughness, R3z, reverse side	ISO 4287/88	µm	≤ 9.0
Surface			velvet/v.f.matte
Mechanical			
Tensile Strength, Yield	ASTM D 882	psi	10,600
Tensile Strength, Break	ASTM D 882	psi	8,530
Elongation at Break	ASTM D 882	%	5
Tear Strength, Initiation	ASTM D 1004	lb/in	1,100
Thermal			
Coefficient of linear thermal expansion, parallel 20°C to 120°C	DIN 53752	10 ⁻⁶ /K	70
Coefficient of linear thermal expansion, across 20°C to 120°C	DIN 53752	10 ⁻⁶ /K	70
Shrinkage, parallel 130°C, 1h	IEC 60674-2	%	--
Shrinkage, across 130°C, 1h	IEC 60674-2	%	--
Heat Deflection Temperature			
1.82 MPa	ASTM D 648	°F	270
0.45 MPa	ASTM D 648	°F	288
Vicat Softening Temperature, Rate A	ASTM D 1525	°F	297
Flammability			
Burning Rate (FMVSS 302)	ISO 3795	mm/min	--
UL Listing	UL 94 V-0	min. thickness	0.010" (250 µm)
UL Listing	UL 94 V-2	min. thickness	--
UL Listing	UL 94 VTM-0	min. thickness	--
UL Listing	UL 94 VTM-2	min. thickness	--
Optical			
Haze	ASTM D 1003	%	89
Light Transmittance	ASTM D 1003	%	> 70(> 20 mil) > 80(< 20 mil)
Yellowness Index	ASTM E 313		1
Other			
Water Absorption (saturation)	ISO 62	%	--
Water Absorption (immersion at 73°F/24h)	ASTM D 570	%	0.30

* These items are provided as general information only. They are approximate values and are not part of the product specifications.

Page 1 of 2 — Document contains important information and must be read in its entirety.

Health And Safety Information

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Makrofol FR 7-2 000000. Before working with these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets and product labels. Consult your local Bayer MaterialScience representative or contact Bayer's Product Safety and Regulatory Affairs Department in Pittsburgh, PA.

Note: The information contained in this bulletin is current as of November 2011, please contact Bayer MaterialScience to determine whether this publication has been revised.

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