



# MAKROFOL<sup>®</sup> HS 520

## *Non-Formable Hard Coated Polycarbonate Film*

### Description and Application

Makrofol HS 520 is a non-formable hardcoated polycarbonate film. The coating provides chemical, stain, and scratch resistance to supplement the well known mechanical, thermal and optical properties of Makrofol polycarbonate film. Makrofol HS 520 was developed for use in the appliance, automotive and electronics markets. As with any product, use of Makrofol HS 520 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
Thickness of Film	ISO4593	µm	255, 505
Gloss (60°)	ASTM D523	GU	On white copy paper ≥ 164
Back painted flat black			≤ 103
Tensile Strength			
Yield	ASTM D882	psi	≥ 9,000
Break	ASTM D882	psi	≥ 5,000
Elongation	ASTM D882	%	≥ 8
Haze	ASTM D1003	%	≤ 0.5
Transmittance	ASTM D1003	%	≥ 91
Pencil Hardness	ASTM D3363		≥ HB
Taber Abrasion	ASTM D1044		≤ 6
Yellowness Index	ASTM D2244	%	≤ 0.5
Sunscreen/DEET Resistance	GMW 14867/14445		P ASS

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

### Chemical Resistance

	1 Hours Surface Contact @ 23°C	4 Hours Surface Contact @ 23°C
Acetone	Pass	Pass
Concentrated HCL	Pass	Pass
MEK	Pass	Pass
Toluene	Pass	Pass
Methylene Chloride	Pass	Pass
Isopropyl Alcohol	Pass	Pass
Cyclohexanone	Pass	Pass
Ethyl Acetate	Pass	Pass
Xylene	Pass	Pass
Butyl Cellosolve	Pass	Pass
Hexane	Pass	Pass

### 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 HS 520. Before working with this product, you must read and become familiar with the available information on its risks, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets and product labels. For further information contact your Bayer MaterialScience representative or the Product Safety and Regulatory Affairs Department in Pittsburgh, PA.

### Stain Resistance

	24 Hours Surface Contact @ 23°C	24 Hours Surface Contact @ 50°C
Coffee	Pass	Pass
Fantastic <sup>1</sup>	Pass	Pass
Formula 409 <sup>2</sup>	Pass	Pass
Windex w/ Ammonia D <sup>1</sup>	Pass	Pass
Mustard	Pass	Pass
Tea	Pass	Pass
Grape Juice	Pass	Pass
ArmorAll <sup>3</sup>	Pass	Pass
Ethanol	Pass	Pass
Sunscreen	Pass	Pass

<sup>1</sup> Registered Trademark of SC Johnson

<sup>2</sup> Registered Trademark of The Clorox Company

<sup>3</sup> Registered Trademark of ArmorAll Products Corp.

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

### Bayer MaterialScience LLC

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