

# AUTOFLEX PC

## Hardcoated Polycarbonate Film

### PRODUCT DESCRIPTION

**Autoflex PC** is a high quality, hardcoated polycarbonate, consisting of a base polycarbonate film coated with a chemically bonded, UV cured, hard surface coating in a gloss or antiglare finish.

**Autoflex PC** was developed for applications where the rigidity and clarity of thick gauge polycarbonate is required along with an abrasion and chemically resistant surface.

**Autoflex PC** is available in sheets and rolls.



READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### PRODUCT RANGE

Product	Finish	Gauge			
		180 µm	250 µm	380 µm	480 µm
<b>Autoflex PC</b>	Gloss	PCG 180L	PCG 250L	PCG 380 2L	PCG 480L PCG 480 2L
	Antiglare	PCA 180L	PCA 250L	PCA 380L	PCA 480L PCA 480 2L

**TYPICAL PROPERTIES**

Property	Typical Value	Test Method
Haze <sup>1</sup> Gloss Antiglare	< 0.3% 10.8% ± 3%	ASTM D1003
Total luminous transmission <sup>1</sup>	92% ± 2%	ASTM D1003
Gloss level (60°) <sup>1</sup> Gloss Antiglare	93 ± 2 50 ± 5	ASTM D2457 (modified to test method 022)
Yellowness index <sup>3</sup>	< 2	ASTM E313
Taber abrasion <sup>1</sup> Gloss Antiglare	< 5% N/A	Test method 103
Hardcoat Adhesion <sup>3</sup>	Pass	Test method 080
Pencil hardness <sup>4</sup>	HB	Test method 058
Tensile strength at break <sup>2</sup>	≥ 60 N / mm <sup>2</sup>	ASTM D882
Breakdown voltage <sup>2</sup> 250 µm	67 kV / mm	ASTM D149
Dimensional stability <sup>3</sup>	0.2% @ 135 °C MD maximum shrinkage	Test method 094
Thicknesses all grades <sup>1</sup>	Nominal ± 10%	Test method 096
Maximum processing temp	120 °C	-
Maximum use temp <sup>1</sup>	Low humidity (<10%RH) 85 °C	Test method 012
	High humidity (10-95%RH) 60 °C	
Minimum use temp <sup>1</sup>	-40 °C (-40 °F)	Test method 012
Chemical resistance	Good hardcoat resistance to many common industrial solvents and household chemicals Please refer to <b>Autoflex PC Solvent Resistance Data Sheet</b>	

Note: All evaluation results are obtained from lab produced samples at MacDermid Alpha Electronics Solutions. They are for general guidance only and do not represent the final product's properties.

<sup>1</sup> For details of the test method, please contact MacDermid Alpha Electronics Solutions

<sup>2</sup> Data derived from base film manufacturer's literature. The coating slightly enhances most properties

<sup>3</sup> Specification value

<sup>4</sup> For more information, please refer to the statement on pencil hardness testing

**PRIMER**

**Autoflex PC** does not require an ink adhesion primer on the second surface. Please ensure that inks are selected that are compatible with polycarbonate.

**TEXTURES**

**Autoflex PC** can be screen printed on the hardcoat surface with Fototex to obtain selective textures (see Fototex Technical Data Sheet).

**LAMINATE**

Polycarbonate films with high gloss surfaces are prone to blocking when stored with the film surfaces touching each other. Blocking is the term given when two surfaces adhere or merge into each other and when separated leave permanent marks on the film. For this reason, MacDermid Alpha Electronics Solutions supplies the **Autoflex PC** film range with a protective laminate on the print surface and recommend that the laminate remains in place until the first ink print pass.

**SHELF LIFE & STORAGE CONDITIONS**

The recommended shelf life is 36 months from the date of manufacture. MacDermid Alpha Electronics Solutions guarantees a minimum remaining shelf life of 8 weeks at the time of despatch.

The recommended shelf life represents the maximum processing lifetime of the product from the date of manufacture when stored correctly and in unopened packaging.

The following storage conditions are recommended:

Storage Conditions	
Temperature	15 to 25 °C
Relative Humidity	50 to 65%
Packaging	Store in original protective packaging Once the packaging has been opened, the processing lifetime can be compromised due to air ingress, contamination or UV light
Moisture	Store away from water sources
Chemicals	Keep away from aggressive solvents
Stacking	For material $\leq 250 \mu\text{m}$ thick, 100 sheet packs should be stacked no more than 10 packs high

**IMDS ID-No**

By arrangement with our regulatory affairs team.

**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use.

**Safety Data Sheets are available.**

**WASTE TREATMENT**

Prior to using any recommendations or suggestions for waste treatment, the user is required to know the appropriate local/state/federal regulations for on-site or off-site treatment which may require permits. If there is any conflict regarding our recommendations, local/state/federal regulations take precedent.

**CONTACT INFORMATION**

To confirm this document is the most recent version, please contact

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US +1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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