

## Product Description

RowTec® SC Polycarbonate Film, meet the growing demand for durable performance, precision and reliability required by manufacturers of security and identity cards, passports, licenses and many other Secure Card applications.

RowTec® SC Film are an extension of the RowTec® family of Polycarbonate Films that for many years have been highly valued by customers around the world for the most demanding precision graphic applications.

## Surface Area

RowTec® SC is well-known for consistent quality and stability. RowTec® SC consists of three types of films: clear, white and laser markable. The clear films are available in thicknesses from 0,051 mm – 0,762 mm and deliver excellent clarity while the white films provide extremely high opacity for their thickness, which also ranges from 0,051 mm – 0,762 mm. The laser markable films are available in thicknesses from 0,051 mm – 0,635 mm.

## Application Area

RowTec® SC Films have a unique surface texture designed specifically for Secure Card applications.

## Technical Data

### Physical

Specific Gravity	ASTM D-792	---	1,20
Area Factor	ASTM D-590	m <sup>2</sup> /kg/μm	833
Water Absorption at equilibrium	ASTM D-570	%	0,32
Rockwell Hardness	ASTM D-785	R Scale	118
Pencil Hardness	ASTM D-3363	Scratch Hardness	B

### Optical

Refractive Index @ 25°C	ASTM D-542	N <sub>D</sub>	1,586
Light Transmission	ASTM D-1003	%	89
Haze <sup>4</sup>	ASTM D-1003	%	0,5
Yellowness Index	ASTM D-1925	---	< 1,0

### Mechanical

Tensile Strength, Break	ASTM D-638	MPa	72
Tensile Strength, Yield	ASTM D-638	MPa	60
Tensile Elongation, Break	ASTM D-638	%	150
Tensile Modulus of Elasticity	ASTM D-638	MPa	2.400
Tear Strength, Initial	ASTM D-1004	N/μm	0,25 - 0,32
Tear Strength, Propagation	ASTM D-1922	g / μm	1,18 - 2,15
Burst Strength <sup>1</sup>	ASTM D-774	Mullen, MPa	0,275 - 0,310
Fold Endurance <sup>2</sup>	M.I.T.	Double Folds	200
Impact Strength, Gardner <sup>3</sup>	ASTM D-5420	J	13

### Thermal

Deflection Temperature under Flexural Load @ 1.8 MPa	ASTM D-648	°C	142
Tensile Heat Distortion @ 0.34 MPa	ASTM D-1637	°C	150
Specific Heat Capacity @ 25 °C	ASTM C-351	J/g/°C	1,26
Thermal Conductivity	ASTM C-177	W/m °C	0,20
Coefficient of Thermal Expansion	ASTM D-696	cm / cm / °C	68,4 x 10 <sup>-6</sup>
Strain Relief @ 135 °C	ASTM D-1204	%	< 0.2
Brittleness Temperature	ASTM D-746	°C	-135
Vicat Softening Temperature	ASTM D-1525	°C	152

### Electrical

Dielectric Strength @ 22°C in oil, short time <sup>2</sup>	ASTM D-149	kV/cm	670
Dielectric Constant 60 Hz / 1 MHz	ASTM D-150	---	3,00 / 3,00
Dissipation Factor 60 Hz / 1 MHz	ASTM D-150	---	0,001 / 0,002
Volume Resistivity	ASTM D-257	Ω-cm	10 <sup>17</sup>
Surface Resistivity	ASTM D-257	Ω-cm <sup>2</sup>	10 <sup>15</sup>

Footnotes: (1) Value for 0,025 mm film (2) Value for 0,250 mm film (3) Value for 0,762 mm film (4) Value measured for Gloss / Gloss film



## IMPORTANT NOTICE

All RowTec® products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning RowTec® products is based upon research, which the Company believes to be reliable although such information does not constitute a warranty. Because of the variety of uses of RowTec® products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use. All specifications are subject to change without prior notice.

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