

RowTec® PC1

GRAPHIC ARTS POLYCARBONATE FILM

Key Performance Properties

- Optical
- Mechanical
- Thermal
- Electrical

Applications

- Printing
- Die-Cutting
- Embossing
- Thermoforming
- Hot Stamping

Technical Data

| | |
|----------------------------|---|
| Thickness Range | 0.002" – 0.030" |
| Surface Textures | Gloss/Gloss* Velvet/Matte Velvet/Gloss Matte/Gloss |
| Master Roll Lengths | up to 2,000 yards (<i>dependent on thickness</i>) Custom roll lengths available |
| Widths | 48.5" – 63" Custom slit widths available |
| Sheets | 24.5" x 48.5" sheets 48.5" x 96.5" sheets Custom trimmed and squared sheets available |

* Standard protective masking configuration (0.005" - 0.007" is cling/cling and 0.010" - 0.030" is stick/cling).



ORAFOL Americas
Advanced Polymer Films

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Technical Datasheet
01/23
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Typical Properties (for Clear unless otherwise noted)

| | Test Method | Units | Typical Values |
|---------------------------------------|-------------|----------------------------|----------------|
| Physical | | | |
| Specific Gravity | ASTM D-792 | – | 1.20 |
| Area Factor | ASTM D-590 | ft ² / lb / mil | 160 |
| 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 | ASTM D-542 | N _D | 1.586 |
| Light Transmission | ASTM D-1003 | % | 89 |
| Haze ⁴ | ASTM D-1003 | % | 0.5 |
| Yellowness Index | ASTM D-1925 | – | < 1.0 |
| Mechanical | | | |
| Tensile Strength, Break | ASTM D-638 | psi | 10,500 |
| Tensile Strength, Yield | ASTM D-638 | psi | 8,700 |
| Tensile Elongation, Break | ASTM D-638 | % | 150 |
| Tensile Modulus of Elasticity | ASTM D-638 | psi | 350,000 |
| Tear Strength, Initial | ASTM D-1004 | lb / mil | 1.4 – 1.8 |
| Tear Strength, Propagation | ASTM D-1922 | g / mil | 30 - 55 |
| Burst Strength ¹ | ASTM D-774 | Mullen, psi | 40 - 45 |
| Fold Endurance ² | M.I.T | Double Folds | 200 |
| Impact Strength, Gardner ³ | ASTM D-5420 | in lbs | 120 |

Footnotes:

(1) Value for 0.001" film

(2) Value for 0.010" film

(3) Value for 0.030" film

(4) Value measured for Gloss / Gloss film

Note

Properties reported here are typical of average lots. Rowland Advanced Polymer Films makes no representation that the material in any particular shipment will conform exactly to the value given herein nor is Rowland Advanced Polymer Films responsible for the performance of this material for a given application. The user of the material should perform their own testing to determine the suitability of the material for the intended use. Applications depicted herein are not specifications. They are provided as information only.

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



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|--|-------------|---------------------------------------|-----------------------|
| Thermal | | | |
| Deflection Temperature under Flexural Load @ 264 psi | ASTM D-648 | °F | 288 |
| Tensile Heat Distortion @ 50 psi | ASTM D-1637 | °F | 302 |
| Specific Heat Capacity @ 77° F | ASTM D-351 | BTU / (lb °F) | 0.30 |
| Thermal Conductivity | ASTM D-177 | BTU / (hr) (ft ²) (°F/in) | 1.35 |
| Coefficient of Thermal Expansion | ASTM D-696 | in / in / °F | 38 x 10 ⁻⁶ |
| Strain Relief @ 275° F | ASTM D-1204 | % | <0.2 |
| Brittleness Temperature | ASTM D-746 | °F | -211 |
| Vicat Softening Temperature | ASTM D-1525 | °F | 305 |
| Electrical | | | |
| Dielectric Strength @ 72° F in oil, short time ² | ASTM D-149 | V / mil | 1,700 |
| Dielectric Constant 60 Hz/1 Mhz | ASTM D-150 | – | 3.00 / 3.00 |
| Dielectric Factor 60 Hz/1 Mhz | ASTM D-150 | – | 0.001 / 0.002 |
| Volume Resistivity | ASTM D-257 | Ω-cm | 10 ¹⁷ |
| Surface Resistivity | ASTM D-257 | Ω-cm ² | 10 ¹⁵ |

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