

Capran® PIR-MT1200 Film



Description

Capran® PIR-MT1200 film from AdvanSix contains 100% post-industrial recycled (PIR) raw materials¹ while providing the same top performance and processability as Capran® MT-1200, its standard, non-recycled counterpart. Capran® PIR-MT1200 film is a 0.47 mil (12 micron) biaxially oriented Nylon 6 film with a metallized barrier coating by controlled vacuum deposition of high-purity aluminum. The metallized film has corona treatment on the reverse side. Capran® PIR-MT1200 film not only maintains its physical properties, but also offers exceptional gas barrier and a pure glossy metallic appearance, making it especially well-suited for packaging and balloon applications.

| Properties @ 73°F (22.7°C), 50% RH | | Typical Value | | Test Method |
|---|---------------------|----------------------------|-----------------------|----------------------------------|
| | | English | Metric | |
| Average Thickness | Target | 0.472 mil | 12 micron | AdvanSix Method |
| | Tolerance | +/- 5% | +/- 5% | |
| Basis Weight | | 8.55 lbs/ream | 13.94 g/sq.m | AdvanSix Method |
| Yield | | 50,500 sq.in/lb | 71.76 sq.m/kg | AdvanSix Method |
| Tensile Strength @ Break | MD | 34,000 - 45,000 psi | 234 - 310 MPa | ASTM D-882 |
| | TD | 34,000 - 45,000 psi | 234 - 310 MPa | |
| Elongation @ Break | MD | 70 - 105% | | ASTM D-882 |
| | TD | 70 - 105% | | |
| Modulus, Secant | MD | 250,000 - 350,000 psi | 1,724 - 2,413 MPa | ASTM D-882 |
| | TD | 250,000 - 350,000 psi | 1,724 - 2,413 MPa | |
| Tear Strength, Graves | | 600 - 1,000 gf/mil | | ASTM D-1004 |
| Dimensional Stability | MD | < 3.0% | | Hot air at 320°F (160°C), 5 mins |
| | TD | < 2.5% | | |
| Optical Density | | ≥ 2.2 | | Macbeth |
| Surface Tension | Non-Metallized Side | > 50 dynes/cm | | ASTM D-2578 |
| Coefficient of Friction, Kinetic | Film to Film | 0.6 - 0.8 | | ASTM D-1894 |
| | Film to Metal | 0.2 - 0.3 | | |
| Oxygen Transmission Rate @ 73°F/0% RH, 23°C/0% RH | | 0.03 - 0.07 cc/100 in²/day | 0.47 - 1.09 cc/m²/day | ASTM D-3985 |
| Water Vapor Transmission Rate @ 100°F/100% RH, 37.7°C/100% RH | | 0.17 gm/100 in²/day | 2.64 gm/m²/day | ASTM F-1249 |

¹Using an industry-accepted mass balance method, AdvanSix allocates recycled material into 100% PIR Capran® films. PIR grades are certified by an independent third-party organization (SCS Global Services) for recycled content, with annual audits.

The values presented in this data sheet are typical values and are not to be interpreted as product specifications.

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Contact AdvanSix

To learn more about the benefits of Capran® films, visit

[AdvanSix.com/NylonSolutions](https://www.advansix.com/NylonSolutions) or call:

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