

Delivering Engineered Packaging Solutions

◆ COMPETITIVE ◆ QUALITY ◆ EXPERIENCED ◆ RELIABLE ◆ INNOVATIVE ◆ INTEGRATED

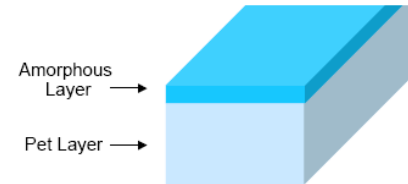
TP LIDDING FILM

Solvent Free

DUAL OVENABLE, REHEATING TRANSPARENT POLYESTER FILM

TP The Ideal Film

- Peelable seals to all typical plastics
- Excellent Hot-Tack
- Peelable Hot or Old
- Printable with Corona Treatment



TP Perfect Application

- Suitable for Lidding, Heat-Seal and MONOWEB
- Sealable to APET, PETG, PVDC, Sheet Metal and to itself
- Weld seal to CPET and APET
- Available in varies gauges

TP Typical Structure

- Ink / TP
- Print Web / Ink / Adhesive / TP

| PROPERTIES | | METHOD | UNIT | TYPICAL VALUES | | | | |
|--|-------------------|--------------|---------------------------|----------------|--------|--------|--------|--------|
| Gauge | | | .00001" | 48 | 60 | 80 | 92 | 120 |
| Nominal Yield | | | in ² /lb | 41,200 | 33,000 | 24,700 | 21,500 | 16,500 |
| F-5 | MD | ASTM D882 | lb/in ² | 0 | 0 | 0 | 0 | 0 |
| | TD | | | 0 | 0 | 0 | 0 | 0 |
| Tensile Strength at Break | MD | ASTM D882 | lb/in ² | 37,000 | 37,000 | 38,000 | 39,000 | 39,000 |
| | TD | | | 36,000 | 36,000 | 37,000 | 37,000 | 37,000 |
| Young's Modulus | MD | ASTM D882 | lb/in ² | 69,500 | 69,800 | 67,700 | 67,400 | 61,300 |
| | TD | | | 69,500 | 69,600 | 69,800 | 70,900 | 70,200 |
| Elongation at Break | MD | ASTM D882 | % | 115 | 120 | 125 | 125 | 125 |
| | TD | | | 120 | 125 | 132 | 137 | 137 |
| Heat Shrinkage (150°C for 30 minutes) | MD | ASTM D1204 | % | 2.1 | 2.0 | 2.0 | 1.9 | 1.6 |
| | TD | | | 0.6 | 0.9 | 0.6 | 1.0 | 0.2 |
| Heat Shrinkage (190°C) | MD | ASTM D1204 | % | 0 | 0 | 0 | 0 | 0 |
| | TD | | | 0 | 0 | 0 | 0 | 0 |
| Coefficient of Friction | Treated vs. Plain | ASTM D1894 | μs μp | 0.40 | 0.30 | 0.30 | 0.30 | 0.30 |
| | | | | 0.38 | 0.26 | 0.26 | 0.26 | 0.26 |
| Gloss | | | | 0 | 0 | 0 | 0 | 0 |
| Haze (1 sheet) | | ASTM 1003 | % | 2.6 | 3.1 | 3.4 | 3.7 | 5.3 |
| Internal Haze | | Toray Method | % | 0 | 0 | 0 | 0 | 0 |
| Surface Tension | | | dyne | 0 | 0 | 0 | 0 | 0 |
| Surface Roughness | | | nm | 0 | 0 | 0 | 0 | 0 |
| Surface Roughness | | | nm | 0 | 0 | 0 | 0 | 0 |
| MVTR - 100°F, 90% RH | | ASTM F1249 | g/100in ² /day | 1.9 | 1.8 | 1.6 | 1.4 | 1.1 |
| O ₂ Barrier 73°F | | ASTM D3985 | g/100in ² /day | 6.0 | 5.6 | 4.9 | 4.0 | 3.3 |
| UVT | | | % | 0 | 0 | 0 | 0 | 0 |

TP Films comply with US FDA 21.CFR 175.300 for direct food contact.

TP Films are solvent free and are manufactured without the use of solvents.

