

Tenopex® TX-EBAG-T Polyester Technical Data Sheet

Description and Applications

Tenopex® TX-EBAG-T is an antiglare high performance, hardcoat polyester film engineered for superior surface durability, optical clarity and print performance. Its 2-3H hardness surface resists abrasion, chemical and repeated actuation. It is optimized for solvent based and UV cured screen printing inks, delivering dependable adhesion, dimensional stability and consistent optics for membrane switches, control panels and durable overlays. Available in 0.13mm, 0.18mm and 0.25mm thicknesses. Variant for digital printing is also available upon request.

Grade options :

“W” for enhanced weatherability and UV stability is typically used for exterior facing graphics such as petrol station panels and outdoor membrane switches / display overlays .

“AB” for antibacterial coating to help suppress bacterial loading on the touch surface, enhancing hygiene for high human machine contact interfaces (overlays & keypads)

Typical Property Values

| Property | Test Method | Units | Value |
|---------------------------------|---------------|--------------------|--------------------|
| Physical | | | |
| Density | ASTM D792 | g/cm ³ | 1.4 |
| Optical | | | |
| Light Transmission | ASTM D1003-61 | % | 92 |
| Haze | ASTM D1003-61 | % | ~ 10 |
| Hardness | - | Pencil Hardness | 2H – 3H |
| Mechanical | | | |
| Tensile Strength at Break | ASTM D882 | Kg/mm ² | 18 |
| Tensile Elongation at Break | ASTM D882 | % | 70 |
| Friction Coefficient | ASTM D1894 | Static | 0.5 |
| Thermal | | | |
| Standard Temperature Resistance | ASTM D1525-76 | °C | > 105 |
| Shrinkage at 130°C/30min | ASTM D1204 | %(min) | 0.3 – 1.5 |
| Electrical | | | |
| Dielectric Strength | JIS C2151 | KV/mm | 3000 |
| Dielectric Constant | JIS C2151 | 1KHz / 1MHz | 3.3 / 3.2 |
| Dissipation Factor | JIS K6911 | 1KHz | 0.2% |
| Surface Resistivity | JIS K6911 | Ω/sqm | 10 ¹⁷ |
| Volume Resistivity | JIS C2151 | Ω.cm | 10 ¹⁷ |
| Conductivity | | | |
| Surface Resistivity | ASTM D991 | Ω/sqm | 80/100/200/400/500 |
| ITO layer Adhesive Strength | ASTM D3359 | % | 95 - 100 |

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These are typical properties and are not intended for specifications purposes. If minimum certifiable properties are required, please contact your local sales representative. Reported values are based on 0.250mm thickness film unless otherwise noted.

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| Anti-Bacteria Properties | Results |
|--|----------------------------|
| Test Organism | Escherichia Coli ATCC 8739 |
| Concentration of bacteria (cfu/mL) | 1.0 x 10 ⁶ |
| Volume of test inoculum (mL) | 0.2 |
| U ₀ | 4.09 |
| U _t | 4.54 |
| A _t | -0.2 |
| R | 4.7 |
| Comment | Pass |
| These results are only used for reference information of the coating agent | |

Notes :

1. The controlled sample is plastic film without antimicrobial activity, provided to 3rd party SGS test lab.
2. U₀ : the average of the common logarithm of the number of viable bacteria (CFU/cm²) that recovered from controlled sample at 0h contact time.
3. U_t : the average of the common logarithm of the number of viable bacteria (CFU/cm²) that recovered from controlled sample at 24h contact time.
4. A_t : the average of the common logarithm of the number of viable bacteria (CFU/cm²) that recovered from sample at 24h contact time
5. R : the value of antimicrobial activity $R = U_t - A_t$
6. The requirement of JIS 2801-2010 : the value of antimicrobial activity > 2.0
7. Test after tearing off the protective film

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