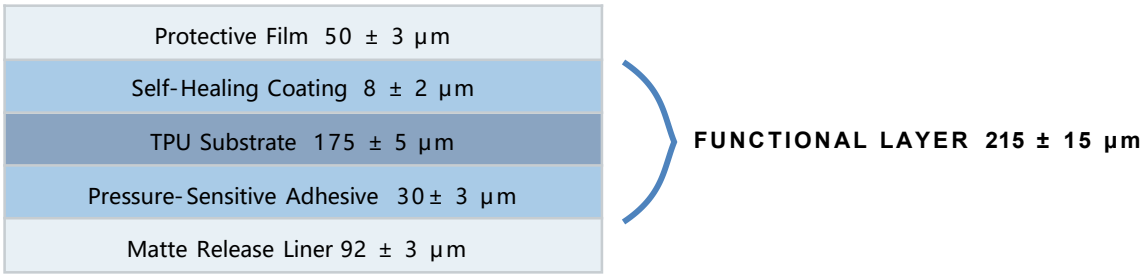
PROMA TECHNOLOGY COMPANY
975 N 1430 W
OREM, UT 84057

# ACPM03-85 TECHNICAL DATA SHEET

## Product Structure:




## Physical Properties:

| Test Item | Test Category | Test Standard or Method | Test Result |
|---|---|---|---|
| **Appearance** | Color | Visual inspection | Transparent |
| **Optical Properties** | Light Transmittance | ASTM D1003 | ≥ 90% |
| | Haze | ASTM D1003 | 15 ± 5% |
| **Physical Properties** | Application-Side Peel Adhesion | ASTM D3330/D3330M, Method A 300 mm/min, 180° | 1500-2500 g/in |
| | Top Layer Peel Force | ASTM D3330/D3330M, Method D 300 mm/min, 180° | < 10 g/in |
| | Bottom Layer Peel Force | ASTM D3330/D3330M, Method D 300 mm/min, 180° | 20-65 g/in |
| | UV Rejection | ISO 9050 | ≥ 90% |
| | Gloss | 60° gloss meter | ≥ 90% |
| | Tensile Strength | ASTM D882 | ≥ 16 MPa |
| | Water Contact Angle | ASTM D7334 | 70-90° |
| **Performance Properties** | Self-Healing Performance | Scratch the surface 10 times with a fine copper brush under a load of 200 g/cm². Restore using hot water or hot air. | ≤ 5 s |
| **Chemical Resistance** | Carburetor Cleaner Resistance | Spray Biaobang carburetor cleaner onto the self-healing surface. After 1 minute, swelling may occur, but the surface shall not become matte. | No matting |
| | Marker Stain Resistance | Apply M&G MG-2110 oil-based marker. After the ink is completely dry, spray and wipe with 100% alcohol. | Slight residue |
| | Acid and Alkali Resistance | Immerse separately in HCl solution (pH 3-5) and NaOH solution (pH 10-12) for 30 minutes. | No loss of gloss, chalking, or discoloration |

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## Physical Properties:

| Test Item | Test Category | Test Standard or Method | Test Result |
|---|---|---|---|
| Aging Resistance | Yellowing Resistance | QUV exposure: 0.5 W, 40°C, 360 nm; 120-minute cycle including 18 minutes of water spray; total exposure 500 h. | ΔE ≤ 2; no cracking or blistering |
| | Hydrolysis Resistance | ISO 1419, Method C | No cracking, chalking, delamination, or discoloration |
| Environmental Reliability | High-Temperature and High-Humidity Test | 85°C, 85% RH, 72 h; change in physical properties <5% | PASS |
| | Thermal Cycling Test | 85°C for 4 h / -20°C for 4 h, repeated for a total of 72 h; change in physical properties <5% | PASS |