

# Membrane Switch - Component Spacer

## 2-1-2 R (.005" Total Thickness)

*Flexcon® SwitchMark® spacer components, overlaminates and laminating adhesives are specifically engineered for demanding membrane switch applications. Specially formulated pressure-sensitive adhesives are designed to bond well to a variety of surfaces. The adhesive also allows the necessary rework time to minimize waste in assembly from misaligned components.*

*Markets Include:  
Membrane Switch  
Aerospace  
Appliance  
Automotive  
Durable Goods  
Consumer Electronics  
Heavy Equipment  
Industrial Equipment  
Medical Device*

*For more information on FLEXcon's pressure-sensitive film solutions for Membrane Switches, contact your local Sales Representative or our Performance Products Business Team at (508) 885-8440.*

*Product ID #: FLX000482*



**Product:**

**Flexcon®  
SwitchMark® 2-1-2 R**

**Benefits:**

- High-performance permanent pressure-sensitive acrylic adhesive bonds well to high-surface energy plastics, metal and paint\*
- Superior mechanical properties ensure long-term membrane switch performance without delamination (ASTM F 1578-00)
- Adhesive offers excellent high-temperature, humidity and chemical resistance
- Product can be repositioned within the first few minutes of application allowing easy correction of assembly mistakes
- Adhesive is compatible with a wide range of solvent and UV ink systems, including conductive, decorative and dielectric inks
- 80 lb. backside branded bleached polycoated mando release liner on one side
- SwitchMark® branded, color-coded (red) release liner ensures easy product identification and mistake proofing during production and switch assembly
- Backed with a layflat 90 lb. polycoated white release liner on the other side
- Moisture stable, layflat release liner is ideal for sheet-form converting
- Ideal for creating custom spacer components, attaching graphic overlays or mounting the membrane switch to the application substrates
- Product is available in rolls and sheets
- Product is RoHS compliant
- Adhesive system has UL recognition under UL746C, Polymeric Adhesive Systems, Electrical Equipment - Component and UL969, Marking & Labeling Systems Materials Component 302°F (150°C)

\*Recommendations: Application surfaces must be above 50°F (10°C). Surfaces must be clean and dry to obtain best adhesion results. Firm and even laminating pressure helps promote better adhesive contact and improves bond strength. Always laminate to exclude air entrapment. For SwitchMark® inquiries in the United States and Canada, please contact Insulectro Distribution at (603) 629-4412. For other inquiries, please contact your Flexcon Sales Representative or call Flexcon at (508) 885-8296.

**Flexcon®**  
**SwitchMark® 2-1-2 R**

PRODUCT DATA	VALUE	TEST METHOD
<b>Physical Properties</b>		
Thickness (Mils[microns])	90 PFW	6.9 (175) +/- 10%
	Adhesive	1.9-2.1 (48-53) +/- 0.1 (3)
	Polyester Film	1.0 (25) +/- 10%
	Adhesive	1.9-2.1 (48-53) +/- 0.1 (3)
	SPEC 80B PFM (black stripes)	4.8 (122) +/- 10%
Dielectric Strength (minus adhesive)	11.0 KV/mil (DC)	
<b>Adhesion Properties</b>		
Ultimate Peel from	Average	ASTM D 903 (Modified for 72 hour dwell time)
	Oz/In (N/m)	
ABS	36 (306)	
Alkyd Enamel Paint	35 (385)	
Conductive Solvent Screen Ink - Acheson Colloids 479SS	48 (528)	
Decorative Solvent Screen - Coates Screen C-99 Series	45 (495)	
Decorative UV Screen Ink - Coates Screen PD Series	80 (880)	
Decorative UV Screen Ink - Nazdar 3400 Ink Series	119 (1309)	
Decorative UV Screen Ink - Nor-Cote Int'l MSK Series	79 (869)	
Dielectric UV Screen Ink - Acheson Colloids 452SS	64 (704)	
Polycarbonate	61 (671)	
Polyester	74 (814)	
Expected Shear		
Room Temp (hours)	100+	
Tack (gm/sq cm)	120	ASTM D 2979
Expected Exterior Life	Two years	
Service Temperature Range	-40°F to 302°F (-40°C to 150°C) with polyester film	
Minimum Application Temperature	50°F (10°C)	
Storage Stability	Two years stored at 70°F (21°C) and 50% RH	

**Product Performance and Suitability**

All of the descriptive information, the typical performance data, and recommendations for the use of Flexcon products shall be used only as a guide and do not reflect the specification or specification range for any particular property of the product. Furnishing such information is merely an attempt to assist you after you have indicated your contemplated use and shall in no event constitute a warranty of any kind by Flexcon. All purchasers of Flexcon products shall be responsible for independently determining the suitability of the material for the purpose for which it is purchased. No distributor, salesman, or representative of Flexcon is authorized to give any warranty, guaranty, or make any representation in addition or contrary to the above.

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