

## 111-27

### DIELECTRIC COATING

**DESCRIPTION:** 111-27 is a flexible, electrically insulating coating suitable for application by spraying, dipping and syringe dispensing. This product features excellent adhesion to Kapton, Mylar, glass, and a variety of other surfaces. Unlike conventional insulating materials, this product is very resistant to flexing and creasing. Some applications for 111-27 include, but are not limited to, insulating polyimide flexible circuits, polymer thick film circuitry, and membrane switches. 111-27 also protects components from moisture, salts, and abrasion.

#### TYPICAL CURED PROPERTIES:

Consistency	Thick liquid
Crease resistance	Excellent
Moisture vapor transmission	Low
Fungus resistance	Non-nutrient

#### Electrical Properties Per MIL-I-46058C

Insulation resistance, ohms (1 to 3 mil film):		
Cycle 1	25°C/50% R.H.	1x10 <sup>15</sup>
Cycle 4	65°C/95% R.H.	4x10 <sup>10</sup>
Cycle 7	65°C/95% R.H.	5x10 <sup>10</sup>
Cycle 10	65°C/95% R.H.	2x10 <sup>10</sup>
24 hours after cycle 10	25°C/50% R.H.	2x10 <sup>13</sup>
Leakage rate:		
Before thermal shock, microamperes		< 10
After thermal shock, microamperes		< 10
Dielectric withstand at 1,500 volts, 50 Hz:		
Before thermal shock and moisture exposure		Pass
After thermal shock and moisture exposure		Pass
Volume Resistivity (ohm-cm)		1.1 x 10 <sup>14</sup>
Dielectric Strength (volts/ mil)		1300
Dissipation Factor (100 Hz)		0.011
Dielectric Constant (100 Hz)		4.1

**SUGGESTED HANDLING & CURING:** Further thinning for spray and/or dip coating may be accomplished by adding MEK. Best properties for most applications result when allowed to be cured for 3 minutes at 130°C. Good properties are obtained on a variety of substrates by curing at temperatures ranging from 25°C to 150°C. End user is advised to experimentally determine temperature and time best suited for individual applications.

**STORAGE:** Shelf Life: 6 months at 21°C.

**SAFETY & HANDLING:** Use with adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin. Keep containers closed to avoid contamination; moisture may cause polymerization. Purge opened containers with an inert gas blanket before resealing.

*All technical information is based on data obtained by CMI personnel and is believed to be reliable. No warranty is either expressed or implied with respect to results or possible infringements on patents.*

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