



# APTEK LABORATORIES, INC.

ISO 9001/AS9100 Certified

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## TECHNICAL DATA & INFORMATION

### APTEK® 6521-PMF

Space Grade, High Strength Epoxy ESD Coating/Adhesive

### PRODUCT DESCRIPTION

**APTEK 6521-PMF** is a carbon-filled, thixotropic, one-component, electrically conductive, high strength epoxy coating/adhesive designed to dissipate an electrostatic charge. This low-outgassing system provides high strength over a wide temperature range.

### KEY FEATURES AND BENEFITS

- Capable of full cure at RT for application where heat cure is not desired or possible
- Exceeds NASA outgassing requirements for space applications
- Excellent strength properties from -55°C to 175°C
- Excellent reversion resistance for good physical stability under high heat and humidity environments
- Excellent substrate adhesion; superior to silicones
- For bond line control, uniform spacer beads can be incorporated into the adhesive, upon request. Various spacer bead sizes available – 0.0017" to 0.010".

### HANDLING INFORMATION

Work life, 5 gm mass, @ 25°C, 50% RH, mins: >30

#### Notes:

1. Work life will be affected by temperature.
2. **APTEK 6521-PMF** syringes are shipped in dry ice. Upon receipt, transfer frozen syringes to a storage freezer @-60°C or below.
3. To thaw remove from freezer and allow to warm to room temperature. Do not place in oven or microwave-this will shorten use life.
4. Typical thaw time for 3cc syringe @25°C ambient is approximately 10-15 minutes.

#### **- DISCLAIMER NOTICE -**

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**CURE SCHEDULE**

5 days at 25°C\*  
or  
1 hour @ 85°C

\*Note: For room temperature curing of this adhesive when the material surface is exposed to air during this cure cycle, a blush-type surface appearance can occur. This phenomenon is inherent for this chemistry; however, all physical and electrical properties on bonded parts cured at room temperature are unaffected.

**TYPICAL PROPERTIES**

(values not to be used for specification purposes)

<b><u>CHARACTERISTICS</u></b>	<b><u>6521-PMF</u></b>	<b><u>TEST METHOD</u></b>
Color	Black	Visual
Specific gravity	1.10	ASTM D-1475
Viscosity @ 20°C, cps	Flowable liquid	ASTM D-1824
Shelf life, @ -60°C or below weeks in factory sealed containers	4	

<b><u>CURED PHYSICAL PROPERTIES</u></b>	<b><u>6521-PMF</u></b>	<b><u>TEST METHOD</u></b>
Lap Shear, primed Al to primed Al, psi	3500	ASTM D-1002
Outgassing @ 10 <sup>-6</sup> Torr		
TML, %	0.60*	ASTM-E595
CVCM, %	0.004	ASTM-E595
*after WVR subtracted		

<b><u>CURED ELECTRICAL PROPERTIES</u></b>	<b><u>6521-PMF</u></b>	<b><u>TEST METHOD</u></b>
Electrical Resistance @ 25°C, Across bonded lap shear panels with 5 mil bondline at 10V bias, ohms	1.0 x 10 <sup>5</sup>	QCP-013

**SAFETY AND FIRST AID**

**APTEK 6521-PMF** is safe to handle when used properly. Avoid contact with skin and eyes and use in a well-ventilated area and avoid breathing vapors. In case of eye contact, flush with fresh clean water for at least 20 minutes. For skin contact, wash thoroughly with soap and water. If swallowed, do not induce vomiting, drink at least one pint of water and call a physician. Refer to Material Safety Data Sheet for more details.

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