



**AI TECHNOLOGY INC**  
 70 Washington Road  
 Princeton Jct., NJ 08550  
 (609) 799-9388 fax (609) 799-9308  
 E-Mail: [ait@aitechnology.com](mailto:ait@aitechnology.com)  
 Internet: <http://www.aitechnology.com>

**Low CTE**

**Low Moisture Absorption**

**Low Ionic Impurities**

( $<5$  ppm @ Cl-, Na+, K+)

**High Temperature Stability**

**IDEAL FOR:**

- Chip Encapsulation
- Low Pressure Injection Molding
- Low Pressure Transfer Molding

**DESCRIPTION:**

MC9883-LPM is a one part, non-epoxy, synthetic quartz crystallite filled chip encapsulation that is designed to use traditional liquid injection molding and transfer molding infrastructure. It is designed for use in closely space single and stack chip packages. It can withstand temperatures up to 350°C without thermal degradation. Its unique chemistry results in very low moisture absorption, high adhesion strength.

MC9883-LPM is designed to be transfer-molded or low pressure injection molded at 40-60°C. Once cured, MC9883-LPM achieves less than 16 ppm/°C and higher than 8 GPa modulus for unparalleled reliability.

**AVAILABILITY:**

MC9883-LPM is available in containers or syringes for automatic dispense applications.

**APPLICATION PROCEDURES:**

- ( 1 ) Thaw to room temperature before opening container.
- ( 2 ) Dispense adhesive onto clean substrate with a suitable pattern to
- ( 3 ) Cure according to the recommended schedule.

**CAUTION:** This product may cause skin irritation. Avoid skin contact. If contact does occur, wash immediately with soap and water. Please refer SDS for more details. The information contained herein is believed to be reliable. All recommendations or suggestions are made without guarantee inasmuch as conditions and methods of commercial use are beyond our control. Properties given are typical values and not intended for use in preparing specifications. The user is advised to evaluate the product in the manner the product is to be used in manufacturing and in the final product. Under no circumstance shall AI Technology be liable for accidental, consequential or other damages arising from the use or handling of this product.

While AI Technology owns all proprietary rights of material formulations of its products, specific usage in the manufacturing of certain products may involve patent rights of other companies.

**MOLDING ENCAPSULATION**  
**MC9883-LPM**

**TYPICAL PROPERTIES\***

Electrical Resistivity ( 160 °C/ 3 )	>1X10 <sup>14</sup> ohm-cm
Dielectric Strength (Volts/mil)	>750
Glass Transition Temp.(°C)	240 ±10%
Lap-Shear Strength	>1000 psi >6.9 N/mm <sup>2</sup>
Device Push-off Strength	>2500 psi >17.2 N/mm <sup>2</sup>
Hardness (Type)	95 ( D ) ±10%
Cured Density (gm/cc)	1.9 ±10%
Thermal Conductivity	>6.9 Btu-in/hr-ft <sup>2</sup> -°F >1.0 W/m-°C
Linear Thermal Expansion Coeff. (ppm/°C)	16 ±15%
Maximum Continuous Operation Temp. (°C)	<300
Avg. Viscosity(0.5 rpm, 25°C)	180,000 cp ±20%

\* Properties given are typical values and not intended for use in preparing specifications. The user is advised to evaluate the product in the manner the product is intended to be used in manufacturing and in the final product.

**CURE SCHEDULES:**

Temperature	Time	Pressure
**170°C	15 minutes	
**200°C	24 seconds	

\*\*Precure at 170°C for 15 minutes, then increase temperature to 200°C and do final cure for 24 seconds.

Please make sure that molding surface in contact with the curing compound be coated with release PTFE or silicone.

**SHELF LIFE:**

Storage temperature	Shelf Life
-40°C	1 yr
ambient	3 months