



TECHNICAL BULLETIN

M-3030 **LIQUID ENCAPSULANT**

M-3030 is a medium viscosity epoxy encapsulant designed for encapsulating microcircuit packaging. It has very long work life and can be handled easily at room temperature, cures in a relatively short time at moderate temperature. It has a low coefficient of thermal expansion, high glass transition temperature, good dielectric properties and excellent chemical and solvent resistance.

The use of synthetic fused silica yields alpha particle emissions suitable for memory devices. A cavity or potting dam is required for flow control.

KEY FEATURES & BENEFITS

- Self-leveling
- Excellent corrosion resistance • Excellent chemical resistance • Excellent moisture resistance
- High temperature performance • High flow control • Excellent Reliability in Thermal Cycling

Typical Package Application:

IC memory cards, Chip carriers, Hybrid circuits, Chip-on-board, Multichip modules, BGA and Pin grid arrays

TYPICAL HANDLING PROPERTIES:

Epoxicast	M-3030
Viscosity at 25°C, cp	90,000-120,000
Work life at 25°C, hrs	>24
Gel time (25 gram) at 125°C, min	10-12
Shelf Life @ -40°C, months	12

Recommended Cure **1 hr/100°C + 1 hr/165°C**
Alternate Cure **2 hrs/150°C**

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Black
Specific Gravity	1.82
Hardness, Shore D	93
Water Absorption (24 hr at RT), %	0.03
Thermal Conductivity (W/m ² K)	0.78
Glass Transition Temperature, (°C)	158
Coefficient of Thermal Expansion, 10 ⁻⁶ /°C	
From -40°C to 25°C	14.8
From 25°C to 150°C	22
Dielectric Constant (1 kHz)	3.6
Dissipation Factor (1 kHz)	0.003
Volume Resistivity, ohm-cm	2x10 ¹⁶

INSTRUCTIONS FOR USE:

1. Frozen packages must be completely thawed before use.
2. Do not remove the cover of the syringe and let it thaw at room temperature for 30 to 60 minutes depend on quantity.
3. Wipe any condensed moisture from the container and open the cover.
4. Proceed with the potting or encapsulating application and cure as recommended.
5. Some difference in properties may occur with the alternate or other cure schedule.

AVAILABILITY:

Premixed and frozen - Packaged in 10cc and 30cc disposable syringes and ship in dry ice at -80°C.

FOR INDUSTRIAL USE ONLY:

Practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

WARNING!

Adequate ventilation of work place and ovens is essential. These materials may cause injury to the skin following prolonged or repeated contact and dermatitis in susceptible individuals. Refer to Material Safety Data Sheet (**MSDS**) for additional health and safety information.