



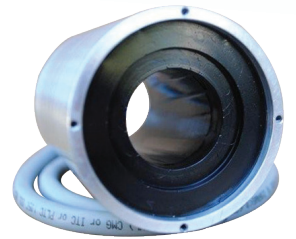
# EFI POLYMERS

FORMULATED SOLUTIONS WORLDWIDE

## AN INDUSTRY LEADER IN CUSTOM FORMULATIONS

### EPOXY ADHESIVES, POTTING COMPOUNDS & ENCAPSULANTS

EFI Polymers is a custom formulator and global supplier of specialty adhesives, potting compounds, encapsulants, and industrial coating products. Our model is simple; unrivaled customer service and the vigorous pursuit of a polymer solution uniquely tailored to your critical requirements. Our goal is to increase performance, reduce costs, and extend the life of your products. Based in Denver Colorado USA, EFI Polymers has been recognized by Inc. 500 as one of the fastest growing private companies in America.



#### HIGHLIGHTED MARKETS AND APPLICATIONS

##### ELECTRICAL POTTING & ENCAPSULATION

- Motor Stators & Motion Control
- Power Switches, Solar Inverters, Utility Meters, Filters
- Power Management, Sensors
- Capacitors, Transistors

#### AVAILABLE CHEMISTRIES

- Epoxy Resin: 1 and 2 component
- Polyurethane, Polyurea & Polyaspartics
- UV Cured Acrylic Systems
- Waterborne PVA/VAE & Polyurethanes
- Silicone Encapsulants and Potting

#### UNDERWRITER'S LABORATORY RECOGNIZED MATERIAL

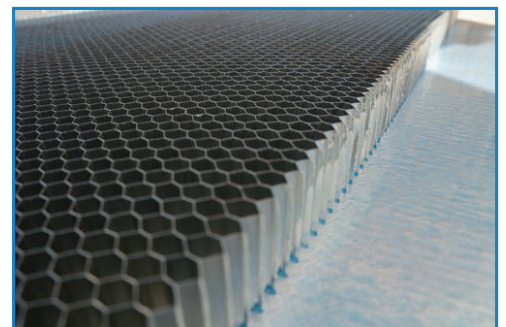
- Extensive UL 1466 Insulation systems available for adoption (UL File number E210549)
- Over 40 UL recognized epoxy and urethane systems
- UL 1446: Thermal stability as part of an electrical insulation system for use up to 180°C (Class H)
- UL 94: Certifications for Flammability of Plastics up to the highest flame rating of UL94-5VA
- Other UL Certifications include Elevated RTI, CTI, HWI, HAI, & F1

#### SPECIALTIES INCLUDE CUSTOM FORMULATIONS

- Customized Polymer Solutions
- Elevated Temperature Performance (>180°C)
- Tailored Coefficient of Thermal Expansion (CTE)
- High & Low Tg Systems (-50°C - 200°C)
- High Thermal Conductivity
- Highly Toughened Adhesives
- Thermal Cycling Resistant (-40°C - 180°C)
- Water, Vapor and Chemical Resistance

#### SYSTEM DESIGN

- Ease of handling & processing
- Low viscosity
- Maximize Air Release
- Optimized Cure Cycle
- Cost Effective



#### SAFETY, HEALTH & ENVIRONMENT

- REACH, RCRA, TSCA, GHS, RoHS FDA Compliant
- Follow American Chemical Society (ACS)
- Responsible Care® Guidelines



## EPOXY ADHESIVES, POTTING COMPOUNDS & ENCAPSULANTS

With over 300 epoxy resin systems, EFI Polymers can meet the most demanding application requirements. When more rigorous or challenging performance is required, we have a +25 year record of excellence in development of custom polymer solutions.

SystemID	Primary Application	Mixed Visc. (cps) @ 25° C	Mix Ratio by Volume	Gel Time (min)	Hardness Value	Tg(° C)	Description
20016/50015	Motor Encapsulation	380	1.33:1	25	70D	78	Provides a resilient finished product with 180° C performance and is an excellent choice for high volume applications. UL 1446 listed. Opaque, unfilled.
20044/50093	Potting	2,500	2:1	40	75D	48	Outstanding hydrolytic stability with flexibility and toughness to thermal cycle down to -40° C without cracking. No effect on Radio Frequency (RF) or (RF4CE) devices. Amber, unfilled.
20203/50089	Electrical Potting	2,000	2:1	24	80D	50	A black, filled, low viscosity, low cost, moderate gelling, 2:1 by volume epoxy for use in ambient cure systems; available in a faster curing version with 50070 hardener. Black, filled.
20203/50201	Motor Encapsulation	11,000	1:1	32	70D	50	Provides a resilient finished product with 180° C performance and is an excellent choice for high volume applications. UL 1446 listed. Black, unfilled.
20215/50203	Electrical Potting	20,000	2:1	90	75D	70	Outstanding moisture resistance, designed for submersible applications under 600 volts. UL94-V0 flame retardancy and superior moisture resistance. Black, filled.
20265/50069	Electrical Potting	7,350	2:1	135	85A	-5	This system is designed for ambient cured potting applications requiring flexibility, flame retardancy and a soft hardness. UL 94-V0 listed. Black, filled.
20273/50002	Electrical Potting	7,500	4:1	150	75D	30	The system is designed for ambient cured applications needing UL94-V0 flame retardancy down to 1/8" (3mm). The cured system has excellent thermal shock resistance. Black, filled.
20279/50080	Electrical Potting	3,100	6.06:1	90	85D	73	A filled, black, low viscosity, flame retardant epoxy for use in ambient cure systems. UL94-V0/UL94-5VA (3mm or < 1/8") with an HWI rating of a "0". Black, filled.
20290/50148	Motor Encapsulation	40,000	4.6:1	50	85D	110	Low shrinkage and low exothermic properties with excellent thermal shock resistance. UL1446 recognized as a potting compound for use up to 180° C (Class H). Black, filled.
20314/50013	Electrical Potting	2,500	5:1	5	85D	68	UL94-V0 with superior 0 rating for CTI, HAI, HWI & HVAR. Excellent thermal shock resistance.
20317/50021	Electrical Potting	3,500	5.3:1	150	85D	50	Designed for ambient or heat cured applications requiring the ability to thermal cycle down to -40° C. The cured system has excellent thermal shock resistance. Black, filled.
20346/50143	Motor Encapsulation	7,000	6:1	25	90D	158	Black, filled high performance, heat-cured. High thermal cycling performance.
20355/50157	Electrical Potting	20,000	10:1	105	96D	108	Highly thermally conductive (1.3 W/m-K), heat cured, filled epoxy.
30040/40033	Electrical Potting	850	1.34:1	110	95A	22	Fast cure, good hydrolytic stability, toughness and resiliency. Widely used for bonding of water filter media requiring fast demold & controlled wicking. Blue.