

ELECTRONIC COMPONENT ENCAPSULATION COMPOUNDS

High Performance Thermoplastics from RTP Company

Quick Information

- ▶ Replace thermosets and expensive ceramics
- ▶ Improve design freedom
- ▶ Reduce or eliminate secondary operation costs
- ▶ Choose laser markable and/or commercial colors

Imagine a thermoplastic compound that protects sensitive microelectronic components from moisture and other environmental conditions. One that improves hermeticity—or sealability—in the precise lead frame injection molding process. At RTP Company, we not only imagined it, we made it a reality.

Electronic Component Encapsulation Compounds—(ec)²—are superior to standard thermoset encapsulation grade materials. They improve thermal conductivity, dissipating heat away from microelectronic components to ensure reliable operation. In addition, they improve dielectric properties for improved energy absorption.

For encapsulation applications, (ec)² Compounds offer lower coefficients of thermal expansion (CTE's) than thermoset materials for improved thermal cycling performance. And, unlike thermosets,

there are no environmental disposal or health and safety concerns. When secondary operations like soldering or adhesive curing cycles are utilized, (ec)² Compounds can be developed to withstand varying degrees of heat while optimizing cost/benefit performance.

For increased design freedom and identification purposes, (ec)² Compounds are available in commercial colors and can be laser marked with characters, numerals, or other graphics providing durable, long lasting identification.

Choose RTP Company's (ec)² Compounds for packaging and protecting microelectronic resistors, integrated circuits, capacitors, and fiber optic connectors.

Electronic Component Encapsulation Compounds...another innovation from the leader in specialty compounding.



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The Leader in Specialty Compounding

Manufacturing Facilities:



Winona, MN
South Boston, VA
Dayton, NV
Beaune, France

Fort Worth, TX
Indianapolis, IN

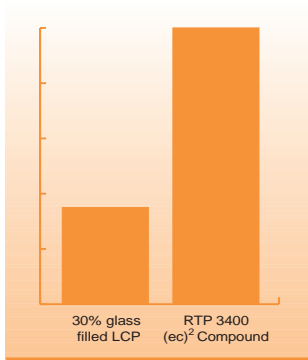
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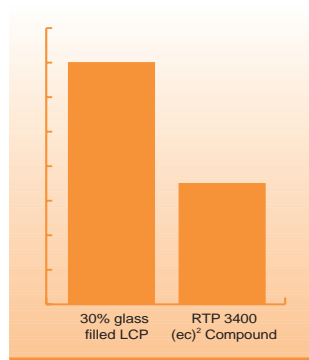
Mechanical Properties of Encapsulation Grade Compounds

RTP Series	Resin	Tensile Strength (psi)	Flexural Modulus (psi x 10 ³)	Specific Gravity	HDT @ 264 psi (°F)	HDT @ 66 psi (°F)
RTP 1000	PBT	13,000	1.7	1.79	395	420
RTP 1300	PPS	19,500	2.2	1.73	515	525
RTP 2000	ALLOY	15,000	1.9	1.54	480	500
RTP 2200	PEEK	19,500	2.1	1.75	585	600
RTP 3400-3	LCP	14,500	2.4	1.84	525	535
RTP 3400-4	LCP	14,500	1.8	1.70	555	600
RTP 4000	PPA	28,000	2.3	1.77	535	545
RTP 4200	TPI	10,500	1.1	1.65	650*	650
RTP 4600	SPS	11,500	1.8	1.58	460	495

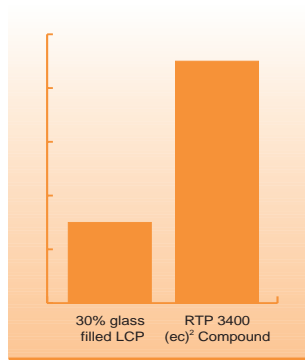
*RTP 4200 Series is based on a crystalline TPI. This product will provide HDT values of approximately 450°F as molded, but with annealing, these values approach 650°F.



Improved Dielectric



Reduced CTE



Improved Thermal Conductivity

Product Development Contact:

Visit RTP Company's website for specific data sheet information or contact:

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