

# Thermosets

Polyester BMC   Styrene-Free Polyester   Phenolic   Melamine/Phenolic

## Lighting

PLENCO thermoset materials offer the thermal stability, electrical resistance, UL flammability ratings and toughness needed for a range of lighting applications. From metalized automotive forward lighting and in-home light baffles to electrical connectors, switches and mounting brackets, PLENCO Thermosets can lead the way.



## Applications

- PLENCO 01581**    Electrical outlets, dimmer switch housings
- PLENCO 03356**    Switch and timer housings, light sockets, junction boxes
- PLENCO 04466**    In-home recessed lighting baffles and trim rings
- PLENCO 08112**    Automotive forward lighting, in-home recessed lighting baffles, wall sconce baffles
- PLENCO 08218**    Outdoor lighting housings, support brackets, outdoor junction boxes

## UL Performance Ratings

PLENCO Thermosetting Polyester materials receive a standard Relative Thermal Index (RTI) rating of 130°C with some grades being rated at 150°C and 170°C at 3.0mm. PLENCO phenolic materials receive a typical rating of 150°C with PLENCO 06582 meeting 180°C.

PLENCO Thermoset materials do not need brominated flame retardants. They do not drip flaming plastic when ignited. Therefore, they all have a minimum UL94 Flammability rating of HB and many achieve the highest ratings of V-0 and 5-VA.



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## Compressive Strength and Modulus



The compressive strength and modulus of PLENCO Thermosets approach those of aluminum and zinc die castings.

This provides exceptional creep resistance, bolt torque retention and molded-in thread strength along with natural electrical insulation. This makes them ideal for support brackets, junction boxes and other electrical connections.

Compressive Strengths to 50,100 psi  
Compressive Modulus 1.8MM psi

## Thread Strength Comparisons

#10 - 5/8" coarse thread self-tapping screw

06310 - glass/mineral reinforced phenolic	126.0 in·lbs torque
06401 - glass/mineral reinforced phenolic	114.0 in·lbs torque
03356 - mineral reinforced phenolic	76.8 in·lbs torque
08218 - glass fiber reinforced polyester	53.0 in·lbs torque



## Surface appearance

PLENCO Thermosets produce a high gloss finish or can be made matte with textured tooling. Polyester materials may be color-matched to your specifications, and they resist yellowing from exposure to heat. Some phenolic materials are available in brown, red or green.

PLENCO thermoset materials are also suitable for powder coating and vacuum metallization, giving you an array of options for your design.

## Adaptability

While PLENCO offers a wide range of materials already suited to many electrical lighting applications, we stand ready to develop the material you need to meet your specific requirements. With 90 years of experience manufacturing Thermoset parts and materials we are highly skilled in part design, tool design, molding methods, material development, process enhancement and post-mold operations.

Contact a PLENCO representative for more information.