Light Castable Mounting Resin

Experimental Resin G5

- Can be used for encapsulating specimens which are either very brittle or can not be subjected to standard compression mounting temperatures
- One component material – no mixing or catalyst addition is required
- Fast (minutes) curing after the resin is activated by UV/visible light
- Clear fast curing thick layers independent of volume of mount, thermal mass of specimen, specimen material, ambient temperature or relative humidity
- High eventual Shore D hardness
- Low to moderate shrinkage
- Relatively low exotherms
- Can be made opaque with fillers, if necessary, which will reduce shrinkage
- Improved adhesion to metals due to adhesion promotion technology
- Mild odor
- Can be utilized for single or multiple layer casting
- Will require an additional coat a fast light setting protective lacquer (resin P) to eliminate surface stickiness when mounting in air. Alternatively, sticky surface layer can be eliminated by pouring glycerin on top of the mounting block after the peak temperature is passed. Glycerin is removed with lukewarm water/soap after curing is complete.
- Sticky top surface can be alternatively removed by wiping the mount with isopropyl alcohol (IPA), resulting in little change in clarity of the mount

Experimental Light Castable Mounting Resin G5 Property Characteristics

Property Characteristic	G5
Cure Time	Set in less than 5 min, 20 min for complete cure
Through cure	50 mm OK
Mixing	Not required
Peak Exotherm - 12 grams	100 – 110 C*
Peak Exotherm - time to peak	2 – 2.5 min*
Color/clarity	Colorless/clear
Viscosity	400 cps @ 25 C, fluid, little or no bubbles trapped
Shrinkage	0.17 – 0.43**
Specific gravity	1.05 – 1.1
Pot life	Unlimited in the absence of light
Cure time to 75 – 80 Shore D hardness	5 – 10 min
Full eventual hardness (Shore D)	90, grindable
Ease of removal from cup	Easy
Stickiness	Slightly sticky on the sides and top, if protective lacquer not used Can be wiped away by isopropyl alcohol or cured under glycerin layer
Solvent resistance	Slight trace if wiped by isopropyl alcohol when sticky, otherwise excellent
Wetting of metal substrates	Excellent
Adhesion to steel	Very good

* Cured in one plug in Technotray CU-like unit or LED unit
** Measured with 12 g cured in one plug as ratio between the diameter of the actually formed plug inside 30 mm diameter cup