



**EL-337
EPOXY LAMINATING
SYSTEM
HIGH TEMPERATURE, GRAY
FILLED**



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DESCRIPTION

EL-337 is an improved, health-safe, two component, filled, non-staining, high temp epoxy laminating system specifically developed for room temp hardening (B Stage) with high temp properties for high temp tooling applications. EL-337 has excellent handling properties and fabric wet-out to produce a void free tool with high dimensional stability. EL-337 can be used in the construction of large or small tools, as well as production parts. EL-337 can also be used with ADTECH High Temp Surface Coats ES-219 and ES-229. Tools made with EL-337 can be used at continuous temperature of 320°F (160°C), and intermittent temperatures up to 375°F (191°C). While EL-337 will gel at room temp, it must be post-cured to achieve ultimate strength. The system contains no MDA or VCHD. **Typical applications include: vacuum form molds, prototype injection molds, high temperature bonding fixtures, spray metal molds, compression molds, high temperature laminated molds and parts to be used in high temp applications.**

TYPICAL HANDLING CHARACTERISTICS @ 77°F (25°C)

Mix Ratio (parts by weight)	100R/16H
Mix Ratio (parts by volume)	4.86R/1H
Specific Gravity	1.26 g/cc
Mixed Viscosity	3000-5000 cps
Work Life (232 gram mass)	45-60 minutes
Demold Time	16-24 hours
Complete Cure	3-5 days
Resin Color	Gray
Hardener Color	Amber
Mixed Color	Gray
Shelf Life Resin & Hardener (in original unopened containers)	2 years

TYPICAL PHYSICAL PROPERTIES (6 Layer, 10 Ounce Glass Fabric Laminate):

Ultimate Tensile Strength	27,285psi (188MPa)
Ultimate Flexural Strength	39,035psi (269MPa)
Flexural Modulus	1,300,000psi (8,963MPa)
<u>Cast Bar:</u>	
Ultimate Compressive Strength	14,930psi (103MPa)
Izod Impact Strength (notched)	5.29 in-lbf/in
Hardness	88 Shore D
Shrinkage	0.00132 in/in
Coefficient of Thermal Expansion (TMA) (ppm/°F (°C))	24 (43)
Tensile Elongation	2%
Glass Transition Temperature (Tg by DMA)	238°F (115°C)
<u>Tested @ 300°F (149°C) (ASTM D-790):</u>	
Ultimate Flexural Strength	8,491psi (59MPa)
Flexural Modulus	820,000psi (5,654MPa)

PRELIMINARY CURE SCHEDULE

On model: Cure for 24 hours @ 77°F (25°C)
+ 2 hours @ 150°F (66°C)

You may attach support structure and demold tool after this schedule is completed.

POST CURE SCHEDULE

After completing the Preliminary Cure Schedule, complete the following:

2 hours @ 200°F (93°C)
2 hours @ 250°F (121°C)
3 hours @ 300°F (149°C)

HEATING AND COOLING RATES DURING POST CURE

Always allow tools made with ADTECH high temp systems to gel at room temperature before subjecting them to post cure (24 hours is usually sufficient). This will prevent excessive exotherm and shrinkage from occurring. When oven curing laminated molds, always place the mold in a room temperature oven. Increase oven temperature at a rate of no more than 50°F (30°C) per hour. When heat cure is completed, turn off oven and allow molds to remain in the oven. Never remove mold from oven until mold temperature has been lowered to less than 100°F (38°C).

EL-337 Tech/Revised 1/6/15
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