

Product Bulletin

CASS POLYMERS

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EL-327
EPOXY LAMINATING SYSTEM
HIGH TEMP - FILLED - GRAY
NON MDA & VCHD

0302

DESCRIPTION

EL-327 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 application. EL-327 has excellent handling properties and fabric wet-out to produce a void free tool with high dimensional stability. EL-327 can be used in the construction of large or small tools, as well as production parts. EL-327 can also be used with ADTECH High Temp Surface Coat ES-219. Use for constant 160°C/320°F and intermittent to 191°C/375°F. While EL-327 will gel at room temp, it must be post-cured to achieve ultimate strength.

USES

Vacuum Form Molds	Prototype Injection Molds
High Temp Bonding Fixtures	Spray Metal Molds
Compression Molds	High Temp Laminated Molds
Parts to be used in High Temp Applications	

HANDLING CHARACTERISTICS @ 25°C/77°F

Mix Ratio (parts by weight)	100R/11H
(parts by volume).....	7.1R/1H
Density (Mixed)	10.8 lbs/gal
.....	0.047 lbs/in ³
.....	81 lbs/ft ³
Mixed Viscosity (ASTM D-2393)	4000-5000 cps
Work Life (1 lb).....	45-55 minutes
Demolding Time.....	16-24 hours
Storage Life (Containers tightly closed at ambient temperature).....	One year

TYPICAL PHYSICAL PROPERTIES @ 25°C/77°F

Hardness (ASTM D-2240).....	90-94 Shore D
Ultimate Compressive Strength (ASTM D-695).....	29,000 psi
Ultimate Flexural Strength (ASTM D-790)	34,500 psi
T ⁹ By DMA.....	138°C/280°F

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Flexural Modulus (ASTM D-790)1.7 x 10⁶ psi
Ultimate Tensile Strength (ASTM D-638)25,000 psi
Glass Transition Temperature (Tg) (By DMA)..... 160°C/320°F
Coefficient of Thermal Expansion (ASTM D-696) 1.4 x 10⁻⁵ in/in/°F

TESTED @ 149°C/300°F

Ultimate Flexural Strength (ASTM-790)..... 15,000 psi
Flexural Modulus (ASTM D-790)0.9 x 10⁶ psi

TESTED AFTER 400 HOURS @ 177°C/350°F

Ultimate Flexural Strength (@ 25°C/77°F) (ASTM D-790)35,000 psi
Flexural Modulus (@ 25°C/77°F) (ASTM D-790).....1.6 x 10⁶ psi
Ultimate Flexural Strength (@ 149°C/300°F) (ASTM D-790)34,000 psi
Flexural Modulus (@ 149°C/300°F) (ASTM D-790).....0.7 x 10⁶ psi

Recommended Cure Schedule: 16-24 hours @ 25°C/77°F
 2 hours @ 66°C/150°F
 2 hours @ 93°C/200°F
 2 hours @ 121°C/250°F
 3 hours @ 149°C/300°F

NOTICE TO HEALTH & SAFETY COMMITTEE, THIS SYSTEM DOES NOT CONTAIN MDA OR VCHD