PRO-SET®

LAMINATING EPOXY

ADHESIVES

PROCESS EQUIPMENT

Technical Data

125 Resin/239 Hardener

Laminating Epoxy

The 125/239 Epoxy system is formulated for laminating synthetic composite structures. Use 125/239 for primary laminating applications. The 125/239 mixture will provide a working time of approximately 420 minutes at 72° F. A typical laminate will be gelled in approximately 10-12 hours at 72° F.

MIXING

Combine PRO-SET 125 Resin with PRO-SET 239 Hardener following the ratios by weight or volume shown in the table. Stir thoroughly and transfer to impregnator, roller pan, or apply directly to the fabric.

CURING

PRO-SET 125/239 mixtures maintain excellent working properties until gel takes place, and at room temperature, will cure to a brittle B-stage. An elevated temperature post cure of 125°F to 180°F **is required** for mixture to reach final cure.

We recommend building sample panels using proposed materials and procedures to understand working and curing characteristics under your shop conditions.

HANDLING CHARACTERISTICS *(Not for specification purposes)*

Property	**Mixed Resin/Hardener**
Density	8.9 lb/gal
Viscosity @ 72°F (ASTM D-2393-80)	600 cps

Mix Ratio (125 Resin:239 Hardener)	**Target**	**Acceptable Range**
by weight	100:30	100:33.1 to 100:26.5
by volume	100:36	100:40.0 to 100:32.0

Pot Life (ASTM D-2427-71)	**100g**	**500g**
@72°F	360 min	280 min
@80°F	263 min	160 min
@88°F	150 min	91 min

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ISO 9001:2000 certified

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PHYSICAL PROPERTIES

125 Resin/ 239 Hardener

Physical Properties	Test Method	Cure Schedule				
		Room Temp.* Cure	**RT* × 15hr + 125°F × 16hr**	**RT × 15hr + 140°F × 8hr**	**RT × 15hr + 140°F × 16hr**	**RT × 15hr + 180°F × 8hr**
Hardness (Shore D)	ASTM D-2240	Post Cure Required	83	84	85	84
Compression Yield (psi)	ASTM D-695		15,291	14,887	15,286	14,461
Tensile Strength (psi)	ASTM D-638		10,796	8,683	9,863	9,824
Tensile Elongation (%)	ASTM D-638		3.8	2.4	5.0	5.5
Tensile Modulus (psi)	ASTM D-638		4.61E+05	4.80E+05	4.67E+05	4.34E+05
Flexural Strength (psi)	ASTM D-790		19,122	16,799	19,545	17,093
Flexural Modulus (psi)	ASTM D-790		5.22E+05	5.07E+05	5.06E+05	4.08E+05
Heat Deflection (°F)	ASTM D-648		158	148	173	179
Glass Transition Temperature (°F)**			163	147	176	189
Ultimate Tg–second heat (°F)**			189	189	189	189
Izod Impact, notched (ft-lb/in)	ASTM D-256		0.62		0.93	0.77

*Room Temperature (70°F–75°F)

** Determined using a Differential Scanning Calorimeter (DSC). Value reported is the onset of the glass transition.

Test specimens were neat epoxy (without fiber reinforcement).

Typical values; not to be construed as specification.

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