SILPAK, Inc

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EPOXY RESIN SYSTEMS

Epoxies are known for their excellent mechanical and chemical resistance properties. They offer great water and heat resistance, as well as providing a tough, strong, low shrink material. Epoxies consist of two parts, Base (E) and Hardener (H), and are mixed at a Specified Mix Ratio. Below are some recommended systems, but other custom systems are available. Contact Technical support for assistance in selecting an appropriate system.

ADHESIVE and FOAM COATING

EPOXY PUTTY PASTE Creamy paste, 1 to 1 mix ratio, used to hard coat foams, as an adhesive, fairing, and patching or decorative sculpting compound *Work Time—90min Cure—12-16hrs*

ALUMINUM TOOLING MOLDS and VACUUM FORM TOOLING

E-108 A HT Aluminum Filled with Good Flow Properties—Low Viscosity
H-82R *Best High Temperature Resistance Hardener—300F+* **Requires Post Cure
H-2052 *Thin Casting Hardener less than 1" Thickness, Heat Resistance below 250F*

CASTING

E-108 WC Water Clear Epoxy, Great for Clear Castings
H-403 *Use for Castings ¼"- 4" Thickness, Long Work Time for bubble free castings 2-4hrs Cure—48hrs*
H-403A *Faster Setting for castings under 3" thick*

CLEAR COAT

E-108 SP-WC Clear Coat Epoxy used for Encapsulating, Coating, Decoupage for Protection of Wood, Plastic or Ceramic
H-499 *Use for thin applications 1/16" Work Time—20min Cure—18hr*

E-108 R Good for Carbon Fiber Layup
H-2052 *Use in thin applications less 1" thickness,* 250F

LAMINATING and TOOLING SURFACE/GELCOAT

E-108 GC Epoxy Gel Coat, Creates a Very Hard Face Coat for Fiberglass Lay-Ups
H-2072 *General Purpose ¼" Thickness Work Time—15min Cure—16hr*
H-82R *Use for application requiring 300F+*

E-108 SP Low Sag, Laminating and Brush-On system, Great Coating for Carving Foams
H-1922

HARDENER DESCRIPTIONS:

H-82R	High Temperature Hardener for Constant or Long Heat Cycles 300F **Requires Post Cure
H-403	Clear, Mass Cast up to 4" Thick, Low 200F Range with Filled Systems
H-403A	Clear Yellow, Faster Setting for Casting Clear Parts upto 3" Thick—200F
H-499	Clear, Fast Cure Under 2" Thick *MIX ONLY SMALL AMOUNTS—QUART
H-1922	Clear Yellow, Thin Section Cure, High Temperature Hardener—High 250F Range with Filled Systems
H-2052	Cold Weather, Thin Section Cure—250F *MIX ONLY SMALL AMOUNTS—QUART
H-2072	Very Quick Epoxy Hardener—Use for Cooler Weather/ Thin Section Pieces
	*MIX ONLY SMALL AMOUNTS—Builds Heat Fast in Mass

Note: Length of time at high temperature determines serviceability of Epoxy. Full cure of Epoxy could be 72 hours or next day with post cure of 125-150F for 2hours. If Constant High temperature resistance is required, allow part to cure at ambient temperature then follow Post Cure Schedule up to the Hardener's ***working temperature***:

150F	1 HOUR/ 2 inch thick	300F	1 HOUR/ 2 inch thick
175F	1 HOUR/ 2 inch thick	350F	1 HOUR/ 2 inch thick
200F	1 HOUR/ 2 inch thick	**Allow part to cool in oven before removing.	
250F	1 HOUR/ 2 inch thick		

***Epoxy may exhibit some brittleness until fully cured. Color can change with UV exposure or with large mass casting which has a higher exotherm.*