



FAST INFUSION EPOXY – A-298/B-224

Description:

Fast Infusion Epoxy is a two-component, very low viscosity system developed specifically for use in resin infusion and VARTM processes. Fast Infusion Epoxy was formulated to provide for rapid saturation of carbon fiber laminate, fiberglass and Kevlar. Processability parameters are enhanced due to Fast Infusion Epoxy's low mixed viscosity and wet-out potential. This system is not designed to be used in open mold applications.

Handling Properties:

RESIN VISCOSITY, cP	1,044	ASTM D 2196
RESIN DENSITY, lb./gal	9.49	ASTM D 792
HARDENER VISCOSITY, cP	39	ASTM D 2196
HARDENER DENSITY, lb./gal	7.78	ASTM D 792
COLOR	Clear/Lt. Straw	
DENSITY, lb./gal	9.07	ASTM D 792
MIX RATIO, pbv (pbw)	3/1 (3.65/1)	
MIXED VISCOSITY, cP	291	ASTM D 2196
GEL TIME (200g), min	32	ASTM D 2471
WORKING TIME*, min	25	

*The working time varies according to the temperature of the air, the epoxy and the surface to which it is applied.
Note: Above viscosities/densities measured @ 77°F.

Physical Properties:

TENSILE STRENGTH, psi	11,000	ASTM D 638
TENSILE MODULUS, psi	276,000	ASTM D 638
ELONGATION @ BREAK, %	4.33	ASTM D 638
COMPRESSIVE STRENGTH, psi	14,200	ASTM D 695
COMPRESSIVE MODULUS, psi	270,000	ASTM D 695
FLEXURAL STRENGTH, psi	18,400	ASTM D 790
FLEXURAL MODULUS, psi	1,087,000	ASTM D 790
HARDNESS, Shore D	87D	ASTM D 2240

Cure Cycle: 24hours @ Room Temperature + 8 hours @ 180°F. Test specimens for above were neat epoxy (without fiber reinforcement).

Thermal Properties:

Tg DMA Peak Tan Delta, °F (°C)*	221 (105)	ASTM 1640
Tg DMA Onset Storage Modulus, °F (°C)*	189 (87)	ASTM 1640
Heat Deflection Temperature, °F (°C)	181 (82.5)	ASTM 648
Tg DSC Ultimate	202 (94.6)	ASTM E 1356

*1 Hz, 3°C per minute.

Cure Cycle: 24 hours @ Room Temperature + 4 hours @ 250°F.

STORAGE INFORMATION

The storage temperature of Medium Infusion Epoxy will greatly affect the ease of mixing, application and, curing time. For best results, Medium Infusion Epoxy should be stored at (60-80 °F or 16-27 °C) for at least 24 hours before use.

MIXING INFORMATION

Mix RESIN WITH (hardener) for 3 minutes using a Jiffy Mixer and a slow speed drill. Mix at slow speed (less than 500 rpm) to avoid air entrainment. When adding part B to part A, be sure to scrape the sides of the hardener (part B) container in order to remove all of the hardener. This is essential to maintain proper mix ratio. DO NOT mix more material than can be used within the stated working time. REMEMBER - you will have less working time at higher temperatures.

CRYSTALLIZATION INFORMATION

Crystallization of epoxy resin is not an uncommon occurrence; in some cases, it is simply a reflection of the high-performance nature of the material. Under the perfect conditions, usually extreme temperature change, any epoxy resin can crystallize. The crystallization may present itself as the resin becoming cloudy all the way to the resin turning to a solid.

Follow the following steps to restore a crystallized epoxy resin to its normal state:

- 1) Place resin container in warm water until the resin reaches approximately 120-degrees Fahrenheit. (An easy way to achieve this with normal household products is a crockpot)
- 2) Keep epoxy resin at this temperature for several hours. Mixing may be needed while warm to dissolve all crystals.
- 3) Allow the epoxy resin to cool back down to room temperature before use. The resin being warm can drastically change working times.
- 4) Feel free to use this epoxy resin just as you normally would.

SAFETY PRECAUTIONS

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymers, sanding) may cause high vapor concentrations. **DO NOT WELD ON, BURN OR TORCH ON OR NEAR, ANY EPOXY MATERIAL. HAZARDOUS VAPOR IS RELEASED WHEN AN EPOXY IS BURNED.**

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