



PT2080 Unfilled Production Laminating System

DESCRIPTION

PT2080 is an unfilled epoxy laminating system that has been designed for, and is ideally suited to, the production of a variety of components and production parts. The mixed viscosity of the system is sufficiently low to allow quick wet-out of the reinforcing fabric, for rapid production of the parts. The cured material exhibits toughness and durability for long service life. PT2080 is an excellent choice when you need ease of use and long term stability.

PRODUCT SPECIFICATIONS

	PT2080-A	PT2080-B	PT2080-B1	PT2080-B2	ASTM Method
Color	Amber	Amber	Amber	Light Amber	Visual
Viscosity,	10,000-11,000 cps	25 cps	35 cps	20 cps	D2392
Specific Gravity, gms./cc	1.15	0.988	0.97	0.96	D1475
Mix Ratio		100 : 20	100 : 24	100 : 24	PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F		45 min.	90 min.	120 min.	D2471

HANDLING and CURING

Three hardeners are provided for use with PT2080 Part A, with different working times, for a range of laminate sizes. The Part B hardener, with a 45 - 50 minute pot life, is better suited for medium to smaller sized laminates, or for colder weather work. Part B1 hardener, with a longer pot life, will provide more working time for larger projects, and Part B2, with just over 2 hours working time, is a good choice for larger projects in hotter summer temperatures. All 3 hardeners can be rapidly cured in an oven for faster production. An advantage of this system, however, is that these hardeners will cure completely at room temperature if needed. If an oven is not available, or if there is an oven breakdown, the PT2080 system will cure properly at normal ambient temperatures.

As this material is used in a production environment, it is important that it can be processed in an expedient manner. PT2080 can be heat cured immediately after lamination is completed if desired. An oven cure of 3 to 4 hours at 150°F is sufficient for full cure. The properties in this bulletin were derived with samples cured for 3 hours at 150°F.

If the laminate is not to be heat cured, then the exact time to demold at room temperature will depend upon factors such as part size and thickness, mold construction and ambient temperature. Therefore, the laminate should be checked periodically after an 18 to 24 hour room temperature cure to determine when it is ready to be demolded.

TYPICAL MECHANICAL PROPERTIES

	PT2080 System*	ASTM Method
Color	Amber	Visual
Mixed Viscosity, @77 ⁰ , centipoise	1100 - 1300 cps	D2393
Cured Hardness, Shore D	89 Shore D	D2240
Specific Gravity, grams, cc	1.11	D1475
Density, lb./cu. Inch	.0401	D792
Specific Volume, cu. in./lb.	24.9	
Tensile Strength, psi	34,631 psi	D638
Elongation at Break, %	1.59 %	
Tensile modulus, psi	2,202,362 psi	
Flexural Strength, psi	47,389 psi	D790
Flexural Modulus, psi	2,143,865 psi	
Compressive Strength, psi	14,553 psi	D695
Compressive Modulus, psi	445,657 psi	
Glass Transition Temperature, DMA: T _g (Peak)	250°F - 260°F (Depending upon Hardener Used)	D4065

* The PT2080 Part B, Part B1 and Part B2 hardeners differ only in pot life, so the cured properties are virtually identical.

PACKAGING WEIGHTS

	Pail Kit	Drum Kit	"Pallet Kit" Weight
PT2080 Part A	40 lb.	500 lb.	3 Drums @ 500 lb. ea.
PT2080 Part B	8 lb.	3 Pails @ 34 lb. ea.	Drum @ 306 lb.
PT2080 Part B1 & B2	9.6 lb. (2 @ 4.8 lb. ea)	3 Pails @ 40 lb. ea.	Drum @ 360 lb.

SAFETY and HANDLING

PTM&W epoxy products are made from raw materials carefully chosen to minimize or even eliminate toxic chemicals, and therefore offer the user high performance products with minimum hazard potential when properly used. Generally, the PTM&W epoxy resins and hardeners will present no handling problems if users exercise care to protect the skin and eyes, and if good ventilation is provided in the work areas. However, breathing of mist or vapors may cause allergenic respiratory reaction, especially in highly sensitive individuals. As such, avoid contact with eyes and skin, and avoid breathing vapors. Wear protective rubber apron, clothing, nitrile rubber gloves, face shield or other items as required to prevent contact with the skin. In case of skin contact, immediately wash with soap and water, followed by a rinse of the area with vinegar, and then a further wash with soap and water. The vinegar will neutralize the hardener and lessen the chances of long term effects. Use goggles, a face shield, safety glasses or other items as required to prevent contact with the eyes. If material gets into the eyes, immediately flush with water for at least 15 minutes and call a physician. Generally, keep the work area as uncluttered and clean as possible, and clean up any minor spills immediately to prevent accidental skin contact at a later time. Keep tools clean and properly stored. Dispose of trash and empty containers properly. Do not use any of these types of products until Material Safety Data Sheets have been read and understood.

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PTM&W Industries, Inc.

10640 S. Painter Avenue Santa Fe Springs, CA 90670-4092

562-946-4511 800-421-1518 FAX: 562-941-4773

Visit Us At: www.ptm-w.com Send Questions To: info@ptm-w.com