



PT2475 Fire Retardant Laminating System

DESCRIPTION

PT2475 is a filled, off-white epoxy laminating system designed for use in constructing fire retardant laminates for parts or reinforcements. PT2475 meets the requirements of the FAR 25.853 Specification.

The cured properties of PT2475 are quite good, and structures fabricated with this system will provide long durable service life. This system has a 1 hour pot life at normal ambient temperatures, which will allow the construction of larger laminated than would be possible with a faster material. The system cures well at room temperature, and the cure can be accelerated with the addition of mild heat if desired.

PRODUCT SPECIFICATIONS

	PT2475 Part A	PT2475 Part B	ASTM Method
Color	White	Amber	Visual
Viscosity, @77°F, centipoise	8,000 - 8,500 cps	25 cps	D2392
Specific Gravity, gms./cc	1.27	0.99	D1475
Mix Ratio, By Weight	100 : 13		PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F	60 - 65 minutes		D2471

HANDLING and CURING

PT2475 A/B will cure completely at normal room temperature (75°F or higher), and does not require an oven heat cure, although the cure time can be shortened by the addition of heat after a room temperature cure on the pattern.

When using this system, 24 hours at room temperature should be allowed before the laminate is removed from the pattern. Longer time on the pattern would be required for very thin laminates. Higher ambient temperatures will shorten these requirements, and conversely, longer cure times will be necessary in colder temperatures. If a faster cure is desired, the laminate can be allowed to cure at room temperature on the pattern for 8 to 12 hours, and then given a heat cure of 2 - 4 hours at 150°F to achieve full cure. Exact times for these cycles will vary with part size, laminate thickness and shop conditions, so it is best to fabricate test coupons to determine optimum cure times.

PACKAGING WEIGHTS

	Gallon Kit	Pail Kit	Drum Kit
PT Part A	9 lb.	46 lb.	475 lb.
PT Part B	1.2 lb.	6 lb.	62 lb. (2 Pails @ 31 lb. ea.)
Kit	10.2 lb.	52 lb.	437 lb.

TYPICAL MECHANICAL PROPERTIES

	PT2475 A/B	ASTM Method
Mix Ratio, By Weight	100 : 13	PTM&W
Color	Off-White	Visual
Mixed Viscosity, @77°F, centipoise	2,100 - 2,300 cps	D2393
Pot Life, 4 fl. Oz. Mass, @77°F	60 - 65 minutes	D2471
Cured Hardness, Shore D	87 Shore D	D2240
Specific Gravity, grams, cc	1.23	D1475
Density, lb./cu. Inch lb. / gallon	0.046 10.3	D792
Specific Volume, cu. in./lb.	22.4	
Tensile Strength, psi Cast Sample 10 Ply Laminate with Style 181 Cloth	6,070 psi 26,492 psi	D638
Elongation at Break, % Cast Sample 10 Ply Laminate with Style 181 Cloth	2.43 % 1.57 %	
Tensile modulus, psi Cast Sample 10 Ply Laminate with Style 181 Cloth	555,960 psi 2,353,522 psi	
Flexural Strength, psi Cast Sample 10 Ply Laminate with Style 181 Cloth	12,727 psi 59,980 psi	D790
Flexural Modulus, psi Cast Sample 10 Ply Laminate with Style 181 Cloth	607,379 psi 2,501,885 psi	
Compressive Strength, psi	13,626 psi	D695
Compressive Modulus, psi	526,053 psi	
Izod Impact Strength, Method A, Notched	0.53 ft.lbs. / inch of notch	D256
Glass Transition Temperature, DMA: T _g (Peak)	194°F	D4065

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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