



PT5355

FIRE RETARDANT EPOXY LAMINATING RESIN

DESCRIPTION

PT5355 is an epoxy laminating system with cured fire retardant characteristics that meets the requirements of the FAR 25.853 specification. Independent lab tests show that this material significantly exceeds the minimum requirements of this specification.

The cured physical properties of PT5355 are quite good, and laminates made with it will give long service in the most demanding applications. It has well-balanced handling characteristics for ease of use and quick fabrication capabilities. There are two hardeners available for use with PT5355 resin for different size laminates. PT5355 Part B has a 30 minute pot life, and is intended for smaller items and patching applications. PT5355 Part B1 has a 1 hour pot life, and is intended for larger laminates. Both hardeners will cure completely at room temperature and provide very similar properties when cured. PT5355 is a good candidate for any application where tough cured properties are needed and a self extinguishing system is required.

PRODUCT SPECIFICATIONS

	PT5355 Part A	PT5355 Part B & B1	ASTM Method
Color	White	Amber	Visual
Viscosity, @77°F, centipoise	1,500 - 2,000 cps	200 - 300 cps	D2392
Specific Gravity, gms./cc	1.22	1.05	D1475
Mix Ratio	100 : 19 By Weight		PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F	With Part B - 30 min.	With Part B1 - 1 hour	D2471

HANDLING and CURING

Both the Part B and Part B1 hardeners for PT5355 will cure completely at normal ambient temperatures (75°F nominal), and do not require an oven heat cure. Laminates made with the Part B hardener can be demolded after an overnight cure (18 hours minimum). When using the Part B1 hardener, 24 hours should be allowed before the laminate is removed from the pattern. Higher ambient temperatures will shorten these requirements, and conversely, longer cure times will be necessary in colder temperatures.

PACKAGING WEIGHTS

	Gallon Kit	Pail Kit	Drum Kit
PT5355 Part A	9 lb.	42 lb.	450 lb.
PT5355 Part B or B1	1.75 lb.	8 lb.	2 @ 43 lb. ea. (86 lb.)
Kit	10.75 lb.	50 lb.	536 lb.

TYPICAL MECHANICAL PROPERTIES

	PT5355 A with B or B1		ASTM Method
Mix Ratio, By Weight	100 : 19 By Weight		PTM&W
Color	White		Visual
Mixed Viscosity, @77°F, centipoise	900 - 1,000 cps		D2393
Pot Life, 4 fl. Oz. Mass, @77°F	Part B - 30 min.	Part B1 - 1 hour	D2471
Cured Hardness, Shore D	88 Shore D		D2240
Shrinkage, inch/inch	Part B - .0005	Part B1 - .0003	D2566
Specific Gravity, grams, cc	1.19		D1475
Density, lb./cu. Inch	.0430		D792
Specific Volume, cu. in./lb.	23.3		
	----CAST SAMPLE----	----LAMINATE*----	
Tensile Strength, psi	7,273 psi	45,775 psi	D638
Elongation at Break, %	1.26 %	1.5 %	
Tensile modulus, psi	624,274 psi	2,754,557 psi	
Flexural Strength, psi	12,346 psi	59,437 psi	D790
Flexural Modulus, psi	668,455 psi	2,894,587 psi	
Compressive Strength, psi	11,265 psi		D695
Compressive Modulus, psi	455,294 psi		
Izod Impact Strength, Method A, Notched	0.68		D256
Glass Transition Temperature, DMA: T _g	127°F		D4065
Heat Deflection Temperature, @ 264 psi	136°F		D648
Coefficient of Thermal Expansion, Range 50°C to 100°C	8.22 x 10 ⁻³ in./in./ °F		D696

* These properties were derived using a 1/8" thick laminate, Style 181 fiberglass cloth, with a 45% resin content

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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