



PT4420

High Performance Aluminum Filled Resin

DESCRIPTION

PT4420 is a high performance epoxy casting resin with many excellent qualities which make it perform very well in a variety of demanding tooling applications. PT4420 has a very high aluminum content that provides excellent machinability to the finished castings. Castings made with PT4420 have high compressive strength for heavy loads. The significant aluminum content gives castings very good thermal conductivity. PT4420 has been designed to exhibit a soft filler settling to avoid time-consuming preblending that is necessary with hard packed fillers.

PRODUCT SPECIFICATIONS

	PT4420 Part A	PT4420 Part B	PT4420 Part B1	ASTM Method
Color	Gray	Amber	Amber	Visual
Viscosity, @77°F, centipoise	200,000 cps (@25°C) 40,000 cps (@50°C)	50 cps	850 cps	D2392
Specific Gravity, gms./cc	1.78	1.05	0.99	D1475
Mix Ratio		100 : 8.5	100 : 17	PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F		50 - 60 min.	2 - 3 hours	D2471

HANDLING and CURING

Both PT4420 hardeners will cure completely at room temperature with no added heat required. Castings made with the PT4420 Part B hardener may be demolded after 18 to 24 hours at 77°F, depending upon the size of the casting. Castings made with the PT4420 Part B1 hardener usually require a full 24 hour cure.

If a shorter cure time is necessary, the casting may be given an oven post cure after a room temperature gel. If this is desired, check with our technical department for curing guidelines. Heat curing will increase shrinkage.

PACKAGING WEIGHTS

	Gallon Kit	Pail Kit
PT4420 Part A	12 lb.	47 lb.
PT4420 Part B	1 lb.	4 lb.
PT4420 Part B1	2.04 lb.	8 lb.

TYPICAL MECHANICAL PROPERTIES

	PT4420 A/B	PT4420 A/B1	ASTM Method
Mix Ratio, By Weight	100 : 8.5	100 : 17	PTM&W
Color	Metallic Gray	Metallic Gray	Visual
Mixed Viscosity, @77°F, centipoise	80,000 psi	85,000 cps	D2393
Pot Life, 4 fl. Oz. Mass, @77°F	50 - 60 min.	2 - 3 hours	D2471
Cured Hardness, Shore D	87 Shore D	86 Shore D	D2240
Shrinkage, inch/inch, Mold Number 2, Volume: .344 gal.	.0006	.0004	D2566
Specific Gravity, grams, cc	1.69	1.60	D1475
Density, lb./cu. Inch	.0611	.0577	D792
Specific Volume, cu. in./lb.	16.4	17.3	
Tensile Strength, psi	9,650 psi	7,900 psi	D638
Flexural Strength, psi	6,400 psi	11,600 psi	D790
Compressive Strength, psi	16,000 psi	24,000 psi	D695

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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