



PT4450 IRON FILLED EPOXY CASTING RESIN

DESCRIPTION

PT4450 is a black, iron filled epoxy casting resin designed to provide tough, durable castings of various sizes and thicknesses. As PT4450 is relatively low in viscosity, it mixes and pours quite easily, and reproduces detail on the model without trapping air or leaving voids. This resin has been designed to be non-settling in transit and storage, so it is easy to prepare and mix for pouring. Castings made with PT4450 have good compressive strength and toughness for long service life. PT4450 has been used for tracer patterns, hydropress form blocks, foundry patterns, metal forming dies and engineering prototype parts.

PRODUCT SPECIFICATIONS

	PT4450 Part A	PT4450 Part B	PT4450 Part B1	ASTM Method
Color	Black	Amber	Amber	Visual
Viscosity, @77°F, centipoise	56,000 cps	50 cps	850 cps	D2392
Specific Gravity, gms./cc	1.73	1.05	0.99	D1475
Mix Ratio		100 : 11.5	100 : 24	PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F		45 - 50 min.	2 - 3 hr.	D2471

HANDLING and CURING

Both PT4450 hardeners will cure completely at room temperature with no added heat required. Castings made with the PT4450 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 PT4450 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
PT4450 Part A	13.5 lb.	50 lb.
PT4450 Part B	1.6 lb.	5.75 lb.
PT4450 Part B1	3.25 lb.	12 lb. (2 @ 6 lb.)

TYPICAL MECHANICAL PROPERTIES

	PT4450 A / B1*	ASTM Method
Color	Black	Visual
Mixed Viscosity, @77°F, centipoise	4,500 cps	D2393
Cured Hardness, Shore D	88 Shore D	D2240
Shrinkage, inch/inch, Mold Number 2, Volume: .344 Gal.	.0001	D2566
Specific Gravity, grams, cc	1.51	D1475
Density, lb./cu. Inch lb. / gallon	.0546 12.6	D792
Specific Volume, cu. in./lb.	18.3	
Tensile Strength, psi	8,600 psi	D638
Flexural Strength, psi	12,200 psi	D790
Compressive Strength, psi	13,500 psi	D695

* These properties were developed with PT4450 B1 Hardener, and are typical of PT4450’s performance.

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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