



PT4455

Iron Filled Surface Coat & Die Casting Resin

DESCRIPTION

PT4455 is a highly filled epoxy casting resin with excellent handling and cured properties. It works quite well in a variety of tooling applications. A very high percentage of iron filler has been used to give the finished castings very low shrinkage and good toughness for long term durability. The cured surfaces of castings made with PT4455 have non-galling characteristics for various forming die applications, where surface finish of the parts is critical. PT4455 is an ideal material for such applications as core boxes and match plates, forming dies, fixtures, molds, patterns and any other uses where durable, extremely low shrink castings are required.

PRODUCT SPECIFICATIONS

	PT4455 Part A	PT4455 Part B	PT4455 Part B1	ASTM Method
Color	Black	Amber	Amber	Visual
Viscosity, @77°F, centipoise	42,000 cps	50 cps	850 cps	D2392
Specific Gravity, gms./cc	2.40	1.05	0.99	D1475
Mix Ratio		100 : 6	100 : 12	PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F		50 - 60 min.	2 - 3 hr.	D2471

HANDLING and CURING

Both PT4455 hardeners will cure completely at room temperature with no added heat required. Castings made with the PT4455 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 PT4455 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
PT4455 Part A	14 lb.	60 lb.
PT4455 Part B	.88 lb.	3.75 lb.
PT4455 Part B1	1.71 lb.	7.25 lb.

TYPICAL MECHANICAL PROPERTIES

	PT4455 A/B	PT4455 A/B1	ASTM Method
Mix Ratio, By Weight	100 : 6	100 : 12	PTM&W
Color	Black	Black	Visual
Mixed Viscosity, @77°F, centipoise	18,000 cps	8,500 cps	D2393
Cured Hardness, Shore D	90 Shore D	89 Shore D	D2240
Shrinkage, inch/inch, inch/foot	.00396 .0475	.00372 .0451	D2566
Specific Gravity, grams, cc	2.24	2.04	D1475
Density, lb./cu. Inch	.0809	.0738	D792
Specific Volume, cu. in./lb.	12.4	13.6	
Tensile Strength, psi	8,300 psi	8,500 psi	D638
Flexural Strength, psi	9,400 psi	9,750 psi	D790
Compressive Strength, psi	17,500 psi	18,800 psi	D695
Heat Deflection Temperature, @ 264 psi	144°F	143°F	D648
Water Absorption, 24 hr. Immersion 24 hr. Immersion + 2 hr. Boil	0.018 % 0.13 %	0.045 % 0.19 %	D670

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.

PT4455 Bulletin / InDesign / 070511-C2



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