



# PT2210 Epoxy Coating and Tool Sealer

## DESCRIPTION

PTM&W's PT2210 A/B tool sealing material has proven to be an excellent material for the repair of leaking tools. This system has a very low mixed viscosity, which allows it to penetrate into the smallest leak paths. It has exceptionally high bond strengths so once it seals the leak, it has excellent adhesion. PT2210 A/B is extremely tough, for an epoxy, which allows it to withstand thermal cycling with out cracking or crazing.

## PRODUCT SPECIFICATIONS

	PT2210 Part A	PT2210 Part B	ASTM Method
Color	Light Amber	Light Amber	Visual
Viscosity, @77°F, centipoise	1,650 cps	20 cps	D2392
Specific Gravity, gms./cc	1.14	1.01	D1475
Mix Ratio, By Weight	100 : 28		PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F	60 - 65 minutes		D2471

## HANDLING and CURING

The mixed viscosity of this system is sufficiently low enough to allow spraying, brushing or flow coating with no difficulty. Mix only enough material that can be applied within the pot life of the mass used, to prevent damage to equipment and to insure proper adhesion of the coating. Try to apply the coating before half of the pot life has elapsed, as epoxies can thicken as they reach the end of the pot life, and the coating will not wet the surface properly if this occurs and adhesion will be less than desired.

PT2210 will cure completely at room temperature, and there is no need for an elevated temperature cure to reach full properties. It will cure to a tack-free condition in 24 to 36 hours at ambient temperatures over 70°F. If desired, PT2210 can be heat cured after a room temperature gel, to allow a tool to be returned to service quicker. A typical oven heat cure would be 3 to 4 hours at 140°F to 165°F. NOTE: PT2210 will soften and probably darken when exposed to higher temperatures. Darkening has no effect on the performance. The softening helps keep the porosity sealed because instead of cracking at high temperatures, it gets pliable.

For more information on applying PT2210, and its use in sealing high-temperature tools, refer to the bulletin "Using PT2210 A/B to Restore Vacuum Integrity of Tools" in the Technical Papers Section of PTM&W's web site ([www.ptm-w.com](http://www.ptm-w.com)).

**TYPICAL MECHANICAL PROPERTIES**

	PT2210 A/B	ASTM Method
Mix Ratio, By Weight, By Volume	100 : 28 By Weight, or 3.2 to 1 By Volume	PTM&W
Color	Light Amber	Visual
Mixed Viscosity, @77°F, centipoise	240 cps	D2393
Pot Life, 4 fl. Oz. Mass, @77°F	60 - 65 minutes	D2471
Cured Hardness, Shore D	82 Shore D	D2240
Specific Gravity, grams, cc	1.15	D1475
Density, lb./cu. Inch lb. / gallon	0.041 9.6	D792
Specific Volume, cu. in./lb.	24.1	
Tensile Strength, psi	8,000 psi	D638
Elongation at Break, %	3.46 %	
Tensile modulus, psi	403,000 psi	
Flexural Strength, psi	11,205 psi	D790
Flexural Modulus, psi	643,000 psi	
Compressive Strength, psi	9,610 psi	D695
Compressive Modulus, psi	141,000 psi	
Glass Transition Temperature, TMA: Tg	122°F	D3386
Coefficient of Thermal Expansion, Range 77°F to 100°F	3.51 x 10 <sup>-5</sup> in./in./ °F	D696

**PACKAGING WEIGHTS**

	Quart Kit	Gallon Kit	Pail Kit
PT2210 Part A	2.25 lb.	7.5 lb.	48 lb.
PT2210 Part B	.63 lb.	2.1 lb.	14 lb. (2 @ 7 lb. ea.)
Kit	2.88 lb.	9.6 lb.	62 lb.

**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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