



MVS-410 System Epoxy Laminating For Construction & Repairs

DESCRIPTION

MVS-410 is an easy to use epoxy resin system with three hardeners available which provide different working times for a variety of uses in fabricating or repairing various sizes of structures. These three systems have very low mixed viscosities, so they will quickly wet out reinforcing fabrics when laminating, for more rapid fabrication. It is easy to add bulk fillers or reinforcements to these systems for special purpose uses. They will also penetrate wood surfaces quite well, and provide a much stronger and rot-resistant surface than the bare wood.

The MVS-410 resin is specially formulated to provide excellent moisture resistance, making it ideal for the construction or repair of items that will be exposed to moisture or high humidity in service. The cured MVS materials have very high heat resistance capabilities. Heat resistance is an important factor in determining the long term stability of epoxy systems, therefore MVS-410's higher heat capability will provide a longer service life and a more stable part or repair. The MVS products are a highly engineered group of materials that have been developed to provide stable, high performance structures or repairs. They are the ideal materials for difficult, problem-prone applications and they easily outperform lower quality, general-purpose materials - for the same money or less!

PRODUCT FEATURES

- MOISTURE RESISTANCE BUILT-IN; EXCELLENT FOR HUMIDITY-PRONE APPLICATIONS
- LOW MIXED VISCOSITIES FOR GOOD WET-OUT AND PENETRATION
- VOLUMETRIC RATIOS FOR ACCURATE MEASURING OR PUMP DISPENSING
- HIGH HEAT RESISTANCE FOR BETTER LONG-TERM STABILITY
- EASILY ADD BULK FILLERS OR REINFORCEMENTS FOR SPECIAL USES
- 3 HARDENERS FOR A BROAD WORKING TIME RANGE

PRODUCT SPECIFICATIONS

	MVS-410 Resin	MVS-462 Fast Hardener	MVS-464 Slow Hardener	MVS-468 Very Slow Hardener	ASTM Method
Color	Light Amber	Amber	Amber	Amber	Visual
Viscosity,	850 cps	1500 cps	200 cps	300 cps	D2392
Specific Gravity, gms./cc	1.14	1.03	0.99	0.97	D1475
Mix Ratio By Weight By Volume		100 : 18 5 to 1	100 : 18 5 to 1	100 : 28 3 to 1	PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F		9.5 min.	23 min.	45-50 min.	D2471

PACKAGING WEIGHTS

	Quart Kit	Gallon Kit	Pail Kit	Drum Kit
MVS-410	2.25 lb.	9.5 lb.	43 lb.	500 lb.
MVS-462 Fast Hardener	.43 lb.	1.8 lb.	8.25 lb.	96 lb. (3 @ 32 lb. ea.)
MVS-464 Slow Hardener	.39 lb.	1.7 lb.	7.5 lb.	90 lb. (3 @ 30 lb. ea.)
MVS-468 Very Slow Hardener	.63 lb.	2.7 lb.	12 lb. (2 @ 6 lb. ea.)	140 lb. (4 @ 35 lb. ea.)

HANDLING and CURING

The three hardeners listed here will all cure completely at room temperature, and no additional heat is required for full properties to develop. All three provide a durable clean cured surface with no surface blush or sticky residue. As stated, with three different working times available, you can choose the system that fits the size project you are undertaking. Through-cure and time-to-sand will vary with each hardener, due to their varying gel times. Generally, time-to-sand for each hardener will be: 3 - 4 hours for MVS-462 Fast Hardener, 6 - 7 hours for MVS-464 Medium Hardener and 8 - 9 hours for MVS-468 Slow Hardener. All three systems cure hard overnight and will reach full properties in 2 - 3 days at normal ambient temperatures. These cure times and conditions were developed at an ambient shop temperature of 72°F - 75°F. Warmer temperatures will shorten these times somewhat, and cooler conditions will lengthen the times.

TYPICAL MECHANICAL PROPERTIES

	MVS-410/MVS-462 Fast System	MVS-410/MVS-464 Medium System	MVS-410/MVS-468 Slow System	ASTM Method
Color	Light Amber	Light Amber	Light Amber	Visual
Mixed Viscosity, centipoise	800 cps	575 cps	1025 cps	D2393
Pot Life, 4 fl. Oz. Mass, @77°F	9.5 minutes	23 minutes	45-50 minutes	D2471
Cured Hardness, Shore D	87 Shore D	87 Shore D	88 Shore D	D2240
Specific Gravity, grams, cc	1.12	1.11	1.09	D1475
Tensile Strength, psi Laminate*	39,374 psi	37,284 psi	37,911 psi	D638
Elongation at Break, %	21.3 %	30.6 %	36.2%	
Tensile modulus, psi Laminate*	2,527,828 psi	2,574,360 psi	2,215,355 psi	
Flexural Strength, psi Laminate*	46,101 psi	40,497 psi	41,354 psi	D790
Flexural Modulus, psi Laminate*	2,073,453 psi	1,968,917 psi	1,870,260 psi	
Compressive Strength, psi	15,487 psi	13,529 psi	12,684 psi	D695
Compressive Modulus, psi	482,152 psi	457,055 psi	428,916 psi	
Izod Impact Strength, ft.-lb./in. Method A, Notched	1.24	0.94	1.17	D256
Glass Transition Temp.: Tg E' (Peak) (Onset)	193.5°F 152.3°F	200.0°F 172.2°F	189.0°F 143.0°F	D4065 (DMA)

*Note: These properties were derived from a 70 mil thick laminate constructed with 1 layer of 24 oz multidirectional stitched fabric with a .75 oz mat face, and 1 layer of 18 oz biaxial stitched fabric with a .75 oz mat face.

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.

MVS-410 Bulletin / InDesign / 122915-C3



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