

Vinyl Ester Carbon Mortar

SELECTION & SPECIFICATION DATA

Type	Carbon filled vinyl ester mortar
Description	Vinyl Ester Carbon Mortar is a 3-component mortar used to bond and bed acid brick in chemical environments.
Uses	Bond and bed acid brick, carbon brick and graphite tile in: • Process vessels • Flooring • Sumps • Trenches • Secondary containment • Nitric-hydrofluoric acid pickle tanks
Features	• Broad resistance to acids, oxidizing agents, bleach conditions, strong alkalis, some organic solvents and fluoride attack • Excellent adhesion to brick and tile surfaces • Creamy consistency • Low shrinkage
Limitations	Not for use beyond its chemical resistance or thermal capabilities. Consult ErgonArmor with specific questions.

INSTALLATION GUIDANCE

Reference Specifications	CES-358	ErgonArmor Specification for Brick Mortar Mixing
Installation Conditions	Vinyl Ester Carbon Mortar is formulated for ideal handling at 70°F (21°C).	
Ratio	1 gallon resin: 2-3 fl. oz. hardener by volume. 1 part catalyzed resin: 2 parts filler by weight. Filler loading may be adjusted slightly to suit individual bricklayer handling preferences.	
Mixing	Pour resin into clean, dry mixing vessel. Slowly add hardener to resin at specified ratio and mix until thoroughly blended. Slowly add filler at suggested ratio and mix until fully wetted.	
Work Life	90 - 120 minutes at 50°F (10°C) 80 - 90 minutes at 70°F (21°C) 20 - 30 minutes at 90°F (32°C) Work life estimates are based on use of 2 fl. oz. CHP Hardener per 1 gallon resin. Increased hardener dosage will reduce work life. Work life is shorter at higher temperatures. A larger volume of mixed material will have a shorter work life than a smaller volume.	
Cleanup	MEK	

CURE TIME

Temperature	Initial Set	Full Cure
70°F (21°C)	2 - 3 hours	72 hours

SAFETY

Safety	Mixes and applications of this product present a number of hazards. Read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using.
Ventilation	Provide thorough air circulation during and after application until the material has cured when used in enclosed areas.

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PACKAGING, ESTIMATING & HANDLING

Product	Code	Packaging
Penntrowel™ Vinyl Ester Resin	22183	36 lb (4.0 gallon) can
CHP Hardener	19552	0.7 lb (11.2 fl. oz) bottle
Penntrowel L/F Filler-Carbon	29446	36 lb (16.3 kg) bag
A 1.12 cubic foot (109 lb or 49.5 kg) unit consists of 1 x 36 lb (16.3 kg) pail of resin, 1 x 0.7 lb (0.3 kg) bottle of hardener and 2 x 36 lb (16.3 kg) bags of filler.		
Theoretical Coverage	Consumption will vary based on brick size and joint width. Consult estimating guide CES-145.	
Storage & Shelf Life	Maintain products in original packaging and sealed until ready for use. Estimated shelf life of resin is 6 months and hardener is 1 year when stored in a dry area at 70°F (21°C). Warmer resin storage conditions will dramatically reduce shelf life. Store resin between 55°F (13°C) and 65°F (18°C) for maximum shelf life. Fillers do not degrade with age when stored in a dry area and packaging is intact. Actual shelf life may vary with storage conditions. If there is any question with respect to the quality of the components, check reactivity prior to use. For assistance consult with ErgonArmor.	

TYPICAL PHYSICAL PROPERTIES

Property	Typical Value
Color	Black
Density, ASTM C138	97 lb/ft ³ (1,553 kg/m ³)
Compressive strength, ASTM C579, 7-day	>10,000 psi (69 MPa)
Tensile strength, ASTM C307, 7-day	>1,400 psi (9.7 MPa)
Flexural strength, ASTM C580	>2,900 psi (20 MPa)
Absorption, ASTM C413	0.2%
Bond strength to brick, pull blocks	Exceeds strength of brick
Maximum service temperature	225°F (107°C)

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