CP-110 HB
High Bond Vinyl Ester Mortar

PRODUCT DESCRIPTION

Blome CP-110 HB represents the next generation of Vinyl Ester resin based mortars for chemical resistant brick and tile construction. CP-110 HB offers advanced technology that results in extremely high bond strength to brick and tile combined with unmatched corrosion resistance in oxidizing bleach and acid service. The materials' inherent bond strength also provides an exceptionally high bond of resin to aggregate resulting in outstanding resistance to wear and erosion in applications exposed to both harsh chemicals and constant flow of pulp, slurries, or other abrasive media. In many instances, the adhesion of CP-110 HB to brick and tile exceeds the strength of the brick or tile themselves.

CP-110 HB is supplied as a two-component mortar with improved shelf life on both Powder and Resin components. When properly stored CP-110 HB components have up to nine (9) months shelf life. In some instances, small amounts of accelerator may be needed to "refresh" pails of older resin. Consult Blome for mixing details.

CP-110 HB is designed for bonding brick and tile in tank and vessel applications requiring resistance to bleached pulp, acids, alkalis, organics and other corrosive chemicals. CP-110 HB is especially suited for use in applications requiring resistance to strong oxidizers such as chlorine, chlorine dioxide, hypochlorite bleaches and oxidizing acids such as nitric and chromic.

Blome CP-110 HB also exhibits enhanced performance at higher temperatures and in strong bleach, acid or solvent service. CP-110 HB withstands temperature excursions in wet vapor service up to 280°F, dry heat up to 400°F and continuous immersion in suitable chemical environments up to 225°F.

TYPICAL USES

Blome CP-110 HB is suitable for bonding chemically resistant brick and tile in a variety of applications including:

- Bleach Towers and Process Vessels
- High Density Pulp Storage Tanks
- Paper Machine Tile Tanks
- Recycled Fiber Tanks and Chests
- Tuckpointing deteriorated mortar joints

HANDLING CHARACTERISTICS

Blome CP-110 HB offers preferred troweling & handling properties with sufficient thixotropy for successful installation of glazed tile. CP-110 HB is smooth spreading and will support a ¼" mortar joint on vertical installations. CP-110 HB will hold brick and tile and secure them from slipping while the mortar cures. CP-110 HB cures rapidly and provides an excellent bond to acid brick and glazed tile. This unique material produces quality results and high production rates.

TYPICAL PROPERTIES
WET

Components:	Two (2) - powder & resin
Wet mortar density:	123 lbs./ft^3
Mixed consistency:	Creamy mortar
Pot life:	50°F 25-30 minutes
	77°F 15-18 minutes
Initial set:	50°F 6 - 8 hours
	77°F 1 - 2 hours
Final cure	50°F 9 days minimum
	77°F 7 days minimum

CURED

Blome CP-110 HB complies with ASTM C-395	
Absorption (ASTM C-413)	less than 0.4%
Bond Strength to brick	Blome test - brick failure
Thermal Expansion Coefficient (ASTM C-531)	12 x 10^{-6} in/in/^{o}F
Color	Off white
Compressive Strength (ASTM C-579)	12,500 psi
Temperature limit	Continuous: 225°F
	In suitable chemical service
	Excursions: 280°F vapor
	400°F dry
Tensile Strength (ASTM C-307)	2,400 psi

PACKAGING & STORAGE

Blome CP-110 HB is supplied as a two-component product, with a filler powder and a resin. CP-110 HB Powder (Part A) is packaged in 70 lb. Bags and CP-110 HB Resin (Part B) is packaged in 40 lb. pails or 450 lb. Drums. The use ratio of Powder to Resin is 4.0 pbw to 1.0 pbw for installing glazed tile. Use a mix ratio of 3.5 pbw to 1.0 pbw for acid brick installations requiring tighter joints or for tuckpointing.

Unit Size	180 lbs.
Powder	140 lbs. (2 x 70 lb. bags)
Resin	40 lbs. (1 x 40 lb. pails)

Shelf life for CP-110 HB components is up to nine (9) months if stored below 70°F at 50% relative humidity. Keep CP-110 HB components tightly sealed in original containers until ready for use. Store components in a cool, dry place, out of direct sunlight on pallets, between 50°F - 80°F. For maximum shelf life, protect bags of Powder from water, humidity and weather, and keep Resin out of direct sunlight while in storage and on job site.

ESTIMATED COVERAGE

Please refer to Blome Brick Mortar Usage Chart in Chemical Proofing Section of Blome Catalog. This chart has estimated usage rates and does not allow for waste, joint variations or other variables.

BID SPECIFICATION GUIDE

Use Blome CP-110 HB High Bond Vinyl Ester Mortar as produced by Blome International, O'Fallon, MO.

JOB SITE ENVIRONMENTAL CONDITIONS

Blome CP-110 HB must be applied while ambient temperatures are between 50°F and 90°F. Blome CP-110 HB components, brick, tile and substrate temperatures must also be maintained in this range. Blome Vinyl Ester Low Temperature Accelerator is available for use when temperatures drop below 50° F. Consult Blome for application

and use details. Installations of CP-110 HB should be protected from water and weather during installation and curing.

SURFACE PREPARATION

Brick or tile to be installed with Blome CP-110 HB must be clean, dry and oil free. If brick or tile have been frozen, they must be thawed completely and allowed to dry prior to installation with Blome CP-110 HB. If applied over Liquid or Sheet membranes, these surfaces should be clean and dry prior to installation of Blome CP-110 HB bed joint. These surfaces should be swept clean and be free of dirt, dust, water or other job site contaminants.

SAFETY PRECAUTIONS

Blome CP-110 HB Powder, Resin and mixes of them present various health hazards if handled improperly. Refer to Material Safety Data Sheet before working with this product. CP-110 HB Powder contains silica and peroxide powders and CP-110 HB Resin is flammable and will cause eye injury and irritate skin. Wear respirator suitable for silica and peroxide powders, safety glasses with side shields, gloves and long sleeve shirts to prevent all contact with skin and eyes. After working with Blome CP-110 HB, wash thoroughly before eating, drinking, smoking or other activities.

APPLICATION EQUIPMENT

Blome CP-110 HB is best mixed with a KOL, pail type mixer or in a pail using a drill motor driven paddle blade. This mixing equipment must be clean, dry and free of any contaminants including Portland cement, other mortars or resins. When mixed, CP-110 HB is applied to tile or brick with a pointing or margin trowel.

MIXING AND APPLICATION

Add approximately 3.5 - 4.0 parts by weight CP-110 HB Powder to 1.0 part by weight CP-110 HB Resin. Mix components using a clean, dry mechanical mixer or trowel for a minimum of 2-3 minutes, making sure there are no lumps or dry pockets of powder. The amount of powder may be adjusted, up or down, to achieve desired consistency for specific uses. More powder will produce a thicker consistency for vertical or overhead applications. Using a clean, dry pointing or margin trowel, butter tile evenly on 2 or 3 sides. Slide buttered tile into place, squeezing excess mortar from joints and striking off. Mortar joint thickness should be 1/8” to 1/4”.

CLEANUP

All tools, mixing equipment, gloves and application equipment should be cleaned up immediately using a citrus or biodegradable cleanser, with hot water, while material is still wet. If material begins to cure, solvent-based cleaners will be required for removal.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANT ABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

Printed: March 1, 2003