

CP-2 **Silicate Brick Mortar**

PRODUCT DESCRIPTION

Blome CP-2 is a two-component silicate based mortar used for the installation of abrasion and chemical resistant brick and tile linings. Blome CP-2 exhibits the required handling and curing characteristics for successful installation of dense alumina ceramic and basalt tile linings in coal piping and other abrasive dry service systems. Blome CP-2 withstands temperatures up to 1,800°F and is resistant to dilute acids found in sulfur bearing coals and other abrasive media.

TYPICAL USES

Blome CP-2 is suitable for bonding abrasion resistant alumina ceramic and basalt tile in a variety of applications including:

- Pulverized Coal Piping Systems
- High Temperature Abrasion Resistant Tile Linings
- Hot exhaust gas applications

HANDLING CHARACTERISTICS

Blome CP-2 offers superior trowelling and handling characteristics, with sufficient body and thixotropy to bed tile in place and secure them from slipping or sliding while the mortar cures. The material utilizes a unique chemical hardening system that cures behind dense abrasion resistant tile installations and provides an adequate bond for the installation of these linings. This combination of handling, curing and performance properties has made Blome CP-2 the worldwide standard for installation of ceramic and basalt linings in high temperature service.

TYPICAL PROPERTIES

WET

Components:	Two (2) - powder & liquid
Wet mortar density:	112 lbs./ft ³
Mixed consistency:	Creamy mortar
Pot life:	50°F 60 minutes 77°F 45 minutes
Initial set:	50°F 12 hours 77°F 6 hours
Final cure	50°F 5 days minimum 77°F 3 days minimum

CURED

Blome CP-2 Complies with ASTM C-466	
Bond Strength to brick (ASTM C-321)	190 psi
Coefficient of Thermal Expansion (ASTM C-531)	7.0 x 10 ⁻⁶ in/in/°F
Color	Off white/gray
Compressive Strength (ASTM C-579)	2,200 – 3,000 psi
Flexural Strength (ASTM C-580)	1,400 – 1,600 psi
Recommended pH for use	0.0 – 6.0
Temperature limit	1,800°F
Tensile Strength (ASTM C-307)	300 psi

PACKAGING & STORAGE

Blome CP-2 is supplied as a two component product, with a filler powder and a liquid binder solution. CP-2 Powder (Part A) is packaged in 50 lb. bags and CP-2 Liquid is packaged in 50 lb. pails or 600 lb. drums. The use ratio of Powder to Liquid is 2.5 pbw to 1.0 pbw.

Unit Size	<u>350 lbs.</u>
Powder (Part A)	250 lbs. (5 x 50 lb. bags)
Liquid (Part B)	100 lbs. (2 x 50 lb. pail)

Shelf life for CP-2 components is one (1) year. Keep CP-2 Powder and Liquid tightly sealed in original containers until ready for use. Store Powder and Liquid in a cool, dry place, on pallets at temperatures between 50°F – 90°F. Protect CP-2 Liquid from freezing. If Liquid does freeze, thaw frozen material back to a liquid solution and then thoroughly remix prior to use, as settling will occur during the thawing procedure. It is important to completely remix thawed liquid to achieve a uniform solution for use.

ESTIMATED COVERAGE

Typical coverage when using Blome CP-2 for the installation of abrasion resistant tile linings is approximately two (2) pounds of mixed mortar per square foot of tile installation. This includes sufficient material for bed joint and vertical joints between the tile or brick. This is an estimated coverage rate and does not allow for waste, bed joint variation or other job site contingencies.

BID SPECIFICATION GUIDE

Use Blome CP-2 Silicate Brick Mortar as manufactured by Blome International, O'Fallon, MO.

JOB SITE ENVIRONMENTAL CONDITIONS

Blome CP-2 must be applied while ambient temperatures are between 50°F and 90°F. CP-2 components, brick, tile and substrate temperatures must also be maintained in this range. It is critical that installations of CP-2 be protected from water and weather during installation and curing. Once cured, Blome CP-2 offers little or no resistance to neutral water solutions. Therefore, completed linings installed with CP-2 must be protected from water and weather, even after curing. Lined fabrications using CP-2 as the bedding mortar must be kept dry during fab shop storage, during shipment and while in storage at the end user facility, until the fabrications are put into service.

SURFACE PREPARATION

Brick and tile linings installed with Blome CP-2 should be installed over clean, blasted and oil free steel substrates. Steel substrates should be abrasive blasted to achieve a commercial blast profile. Brick and tile to be installed with Blome CP-2 must be clean, dry and oil free. If brick or tile has been frozen, they must be thawed completely and allowed to dry prior to installation with Blome CP-2.

SAFETY PRECAUTIONS

Blome CP-2 Powder, Liquid and mixes of them present various health hazards if handled improperly. CP-2 Powder contains silica dust and CP-2 Liquid is an alkaline solution that will severely burn eyes and irritate skin. Wear respirator suitable for silica dust, safety glasses with side shields, gloves and long sleeve shirts to prevent all contact with skin and eyes. After working with Blome CP-2, wash thoroughly before eating, drinking, smoking or other activities.

APPLICATION EQUIPMENT

Blome CP-2 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, resins, etc. When mixed, CP-2 is applied to brick, tile & substrate with a pointing or margin trowel.

MIXING AND APPLICATION

Add approximately 2.5 parts by weight CP-2 Powder to 1.0 part by weight CP-2 Liquid. 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. Using a clean, dry pointing or margin trowel, butter brick or tile evenly on 4 or 5 sides. Slide buttered brick or tile into place squeezing excess mortar from joints and striking off. Maximum mortar joint thickness should be 1/8".

CLEANUP

All tools, mixing equipment, gloves and application equipment should be cleaned up immediately using hot, soapy water. Any material that is allowed to cure prior to clean up should be chiseled or chipped off, then dirty items should be soaked in hot, soapy water overnight and then cleaned and dried.

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.

Rev. 6/20/20