

## **BLOME CP-11M Single Component Silicate Brick Mortar**

### **PRODUCT DESCRIPTION**

Blome CP-11M is a single component Silicate based mortar used for the installation of chemical and abrasion resistant brick and tile linings. Blome CP-11M exhibits the required handling and curing characteristics for successful installation of dense alumina ceramic and basalt tile linings in coal piping and other dry service systems. Blome CP-11M 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-11M is suitable for bonding abrasion resistant alumina ceramic and basalt tile in a variety of applications including:  
 Pulverized Coal Piping Systems  
 Abrasion Resistant Tile Linings in high temperatures  
 Hot exhaust gas applications

### **HANDLING CHARACTERISTICS**

Blome CP-11M offers excellent 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. CP-11M is a single component formulation that is easily mixed with water at the time of use. CP-11M 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.

### **TYPICAL PROPERTIES WET**

Components:	One (1) – powder
Wet mortar density:	112 lbs./ft <sup>3</sup>
Mixed consistency:	Creamy mortar
Pot life:	50°F 50 minutes 77°F 25 – 35 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-11M Complies with ASTM C-466	
Bond Strength to brick (ASTM C-321)	190 psi
Coefficient of Thermal Expansion (ASTM C-531)	6.8 x 10 <sup>-6</sup> in/in/°F
Color	tan/gray
Compressive Strength (ASTM C-579)	3,000 psi
Flexural Strength (ASTM C-580)	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-11M is supplied as a single component, dry powder product that is mixed with water at the time of use to reach a trowelable mortar consistency. Blome CP-11M Powder is packaged in 50 lb. bags.

Shelf life is six (6) months at 70°F and 50% relative humidity. In high humidity environments shorter shelf life should be expected. If CP-11M powder begins to harden or lump in bags, be certain to break up all softer lumps of material prior to use. Material that is beyond shelf life will harden in bags and should be discarded.

Keep CP-11M Powder tightly sealed in original containers until ready for use. Store in a cool, dry place, on pallets at temperatures between 50°F – 90°F. If powder is stored in high humidity, shelf life will be reduced.

## **ESTIMATED COVERAGE**

Typical coverage when using Blome CP-11M 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 jobsite contingencies.

## **BID SPECIFICATION GUIDE**

Use Blome CP-11M Single Component Silicate Brick Mortar as manufactured by Blome International, O'Fallon, MO.

## **JOB SITE ENVIRONMENTAL CONDITIONS**

Blome CP-11M must be applied while ambient temperatures are between 50°F and 90°F. CP-11M components, brick, tile and substrate temperatures must also be maintained in this range. It is critical that installations of CP-11M be protected from water and weather during installation and curing. Once cured, Blome CP-11M offers little or no resistance to neutral water solutions. Therefore, completed linings installed with CP-11M must be protected from water and weather, even after curing. Lined fabrications using CP-11M 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-11M 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-11M 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 CP-11M.

## **SAFETY PRECAUTIONS**

Blome CP-11M Powder, and mixes of it with water, present various health hazards if handled improperly. CP-11M Powder contains silica dust and when mixed, CP-11M mortar 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-11M, wash thoroughly before eating, drinking, smoking or other activities.

## **APPLICATION EQUIPMENT**

Blome CP-11M 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-11M is applied to brick, tile & substrate with pointing or margin trowel.

## **MIXING AND APPLICATION**

Add approximately 6.5 parts by weight CP-11M Powder to 1.0 part by weight water. Do not over-wet mixed mortar; when water is initially mixed with powder, mix will appear too dry. Continue mixing for 1-2 minutes and mortar will "wet out" to creamy consistency. Mix using a clean, dry mechanical mixer for a minimum of 1-2 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.