BLOME INTERNATIONAL

Surrounding You with Exceptional Protection

CHEMICAL PROOFING SYSTEMS

BLOME CP-14CC

Modified Calcium Aluminate Concrete - Coarse Casting Grade

GENERAL

BLOME CP-14CC is a hydraulic-setting, modified calcium aluminate cement. CP-14CC is designed for placement by casting in the construction of monolithic floors, linings and trenches exposed to high temperatures. CP-14CC is designed to withstand high temperatures, thermal shock and chemical attack by mild acids or alkalis.

TYPICAL USES

BLOME CP-14CC is used to protect new or restore old areas exposed to high temperatures, mild acids or alkalis. These applications include:

- Floors exposed to molten metal splash
- Floors exposed to high temperatures near ovens, furnaces, etc.
- Incinerators and ductwork
- Molten sulfur pits
- Other high temperature castable applications

BENEFITS

Corrosion resistant - CP-14CC has good resistance to mild acids and alkalis, and offers protection from abrasion in flue gas environments.

Temperature resistant - CP-14CC is suitable for service at temperatures up to 2,000 °F.

Ease of application - CP-14CC is mixed, placed and finished just as regular concrete is. The material may be cast on horizontal areas or it may be poured into forms for vertical areas. Vertical forms higher than 12" may require vibration.

PROPERTIES

Water absorption.....	7.8%
Acid resistance.....	Good
Material color.....	Brown
Compressive strength @ 77 °F – 8 hours……	2,000 – 2,500 psi
Compressive strength @ 77 °F – 24 hours…….	5,000 – 5,500
Compressive strength @ 77 °F - Ultimate.....	7,500 – 8,000 psi
Density.....	140 LB/Cu Ft
Yield (50 lb. bag, mixed w/water).....	Approximately 0.4 Cu Ft
pH range for use.....	4.0 - 12.0
Maximum service temperature.....	2,000°F
Mix ratio (Powder:Water, by weight)……	8:1 to 5:1, depending on desired slump
Work life @ 77 °F……	60 – 70 minutes

PACKAGING

BLOME CP-14CC is supplied in 50 lb. bags.

MIXING AND APPLICATION DATA

BLOME CP-14CC is supplied as a single-component product and is to be mixed with clean, cool potable water to desired slump as follows:

1) Surfaces to be lined with BLOME CP-14CC must be free of oil, grease and other contaminants.

2) Operating conditions may require that a membrane be applied to the substrate prior to the installation of the concrete. Consult BLOME INTERNATIONAL for details.

3) BLOME CP-14CC powder, water and the substrate are to be maintained at a temperature of 50°F to 90°F. Below 50°F the cure will be slowed causing the material to slump. Above 90°F the material will set too quickly.

4) Mix CP-14CC with approximately 6-10 lbs. (0.75 – 1.25 gal) clean, cool water per bag, in a dry paddle type mortar mixer, this mixer must be free of any Portland cement, lime or other contaminants. ADJUST WATER LEVEL TO ACHIEVE DESIRED SLUMP.

5) When the components are mixed completely and the area for placement is ready to receive material, pour the mixed concrete onto the desired surface or into a wheelbarrow for transfer to desired area.

6) Do not allow large quantities of CP-14CC to sit in buckets or in the wheelbarrow as deep sections of CP-14CC will have a limited working time.

7) Vertical forms are best filled using shovels or trowels. Form boards must be coated with a petrolatum based release agent or wrapped with a 2-4-mil polyethylene sheet to prevent CP-14CC from sticking. It is recommended that all vertical forms higher than 12" be externally vibrated to remove any entrapped air. Some cast vertical installations of CP-14CC may require anchoring to the substrate with an appropriate reinforcement system. Contact BLOME INTERNATIONAL for specific recommendations.

8) Using a screed board or straight trowel, drag off cast material to desired thickness (2" minimum).

9) Proper cure of CP-14CC is critical. CP-14CC cures by hydraulic set. Premature dehydration of the castable material will result in a loss of physical properties. When placing over existing concrete, be sure to pre-dampen substrate to avoid drying out of the castable. Cover installations with plastic or apply Blome Curing Compound. Blome Curing Compound should be applied at a minimum coverage rate of 200 ft^2 per gallon. This resin based curing compound can be spray applied, rolled or brushed on.

10) Protect installation from water and weather and allow to cure fully before putting into service.

CURING

Blome CP-14CC cures by hydraulic set. Therefore, it is important to prevent premature drying of the concrete. To prevent this, cover area with plastic or apply Blome Curing Compound. Blome Curing Compound is typically applied at a rate of 200 ft2 per gallon over freshly placed concrete, while still wet. The curing compound retains moisture in the concrete for the initial 24-hour curing period for proper hydraulic cure. CP-14CC cures at the following rates:

Initial set –	50ºF:	12 - 16 hours
	77ºF:	6 - 8 hours
Final cure –	50ºF:	7 days minimum
	77ºF:	5 days minimum

QUALITY CONTROL

Prepare test cylinders when CP-14CC is placed for strength testing, if desired. Prevent premature drying in the manner described above.

CAUTION

BLOME CP-14CC Powder presents various health hazards if handled improperly. Handle with care and read and abide by the product safety label found on each bag and the Material Safety Data Sheet that is available for this product.

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 to be used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANTABILITY 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 suggestions 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.

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