

GENERAL

BLOME CP-24LW is a two-component, inorganic, 100% Potassium Silicate insulating concrete. CP-24LW may be gunited or cast into place. CP-24LW can be used in conjunction with various membrane systems to protect concrete or steel surfaces from chemical attack by strong acids, acid vapors and gasses, high temperatures and thermal shock. Due to its low density, BLOME CP-24LW reduces the dead load on structures in which it is installed and provides high insulating values and thermal protection for the membrane and substrate.

TYPICAL USES

BLOME CP-24LW can be used to protect new or to restore old acid exposed structures. It is especially suited for applications such as:

- ° Chimneys
- ° Stacks
- ° Ductwork
- ° Breechings
- ° Incinerators
- ° Kilns
- ° Scrubbers
- ° Precipitators
- ° Sulfur Pits
- ° SRUs

BLOME CP-24LW is resistant to all concentrations of all acids (except HF). CP-24LW resists acids from pH 0.0 to 7.0. CP-24LW is not recommended for use with hydrofluoric acid, hydrofluosilicic acid, fluoride salts, or caustics or alkalis.

BENEFITS

Low thermal conductivity - CP-24LW has extraordinarily low thermal conductivity. Its high insulating values render exceptional thermal protection to the membrane system and substrate behind the monolithic.

Lightweight - The low density of BLOME CP-24LW significantly reduces the dead load on structures in which it is installed. This results in a lower overall weight of the structure and lower cost, structural design requirements.

Exceptional corrosion resistance - CP-24LW has excellent resistance to concentrated acids, such as 98% Sulfuric, 65% Nitric, 37% Hydrochloric and concentrated Chromic.

BLOME CP-24LW Lightweight Acid Proof Concrete



Temperature resistant - Due to a unique potassium silicate formulation, CP-24LW is suitable for service at temperatures up to 2,000°F with little or no loss in physical properties.

Ease of application - CP-24LW is easily installed by casting into place, or it may be gunited. When gunited, CP-24LW exhibits extremely low rebound resulting in cost savings

MIXING AND APPLICATION DATA

BLOME CP-24LW is a two component product, consisting of a powdered aggregate and a liquid binder. Mix and apply as follows:

- 1) The mixing ratio for casting applications is 2.0 parts by weight powder to 1.0 part by weight liquid.
- 2) For casting, be sure to use clean equipment (mortar box, hoe or mechanical mixer) to mix the material.
- 3) CP-24LW is complete as supplied. DO NOT add water, sand, Portland cement or other adulterants to the material.
- 4) CP-24LW hardens by internal chemical set. For casting applications, pour CP-24LW onto the

desired surface, and strike off with a trowel or board, one time only. After the cement is in place, it is recommended that the wet concrete be covered completely with a 4-6 mil sheet of plastic. This will prevent premature drying of the surface and surface tearing cracks. At this time, a skin will form on the surface of the cement and any subsequent trowelling may tear the surface.

5) It is recommended to keep the concrete covered with plastic and protected from water, weather and traffic for 48 hours at 70⁰F; at 90⁰F, 36 hour curing is adequate.

6) Vertical installations of CP-24LW must be at least 1-1/2" thick and reinforced with V-type or longhorn anchors. Anchors should be arranged in a diamond pattern spaced on ten inch centers. Six inch centers are recommended for overhead installations. Anchor penetration into the monolithic should range from 50% to 75% of the lining thickness.

7) The anchoring system along with the substrate is to be coated with the membrane.

8) The mixing ratio for guniting is 3.0 parts by weight powder to 1.0 part by weight liquid.

9) For gunite applications, CP-24LW powder should be predampened using 1 pint water to 50 lbs. CP-24LW powder. The gunite machine should be a standard rotary type or other similar approved model. Use an air operated booster pump to pump liquid to the nozzle. Use a "Spirolet" type nozzle to obtain the best gunned surface.

10) A qualified gunite nozzleman must operate the nozzle, making certain not to over-wet the cement or to apply it too dry. Excess liquid will cause slumping of the gunite. Excess powder will produce a dry, powdery surface, weaker than properly mixed cement. Make normal adjustments at the nozzle to keep the proper ratio.

11) After gunite is applied, there should be no finishing by trowel or finishing board.

COVERAGE

Quantities Required per Square Foot

Thickness (Inches)	Approximate Pounds	
	Cast	Gunned
1	7.5	8.5
2	15.0	17.0

Quantities do not include losses incurred during application or normal density variations.

CURING RATES

Temperature.....	70 ⁰ F
Working Time.....	20-30 minutes
Initial Set.....	4-6 hours
Final Cure.....	48 hours

These curing rates are accurate at 70⁰F. Lower temperatures will retard the cure and higher

temperatures will accelerate the cure. Do not use CP-24LW below 50⁰F.

Allow linings cast or gunited with CP-24LW to cure for 48 hours at ambient temperatures (50⁰F minimum). Linings that will operate above 200⁰F should be raised to 212⁰F and held for a period of 6 hours per inch of lining thickness. The temperature should then be raised at a rate of 50⁰F per hour to a maximum of 300⁰F and held for 6 hours per inch of lining thickness. The temperature can then be elevated to the maximum operating temperature at a rate of 100⁰F per hour.

PROPERTIES

Color.....off white

Density (cured and Dried)

Cast.....70 pcf

Gunned.....89 pcf

Recommended pH range for use.....0.0 - 7.0

Maximum service temperature.....1,800⁰F

Shrinkage.....0.9%

Thermal Conductivity

(100⁰F-1800⁰F).....3.0 BTUin/ft²hr⁰F

*These properties are based on samples mixed and used at 70⁰F. All data was compiled under laboratory conditions and actual field results may vary. All data is subject to reasonable deviation and should not be used to specification purposes.

PACKAGING

CP-24LW Powder.....50 lb. bags

CP-24LW Liquid.....600 lb. (55 gal.) drums

CAUTION

BLOME CP-24LW Powder, Liquid and mixes of them present 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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Supersedes all previous literature