



KEM PROCRETE

High Solids Acrylic Co-polymer Emulsion Based Waterproofing Compound and Bonding Agent

Ref. WP/CO-V1-1212

Description

KEM PROCRETE is an acrylic emulsion based admixture for waterproof coating, bonding agent for repair, Mass-in-fill and non-shrink polymer modifier cement grout system. KEM PROCRETE enhances the properties of cement slurry mortar & concrete such as flexural strength water penetration resistance etc.

Uses

- It is recommended for use in the following areas of application:
 - Waterproof and damp-proof coating in the form of cement slurry/cement mortar.
 - As a bonding agent on cold/construction joints. Concrete repair as a patching mortar.
 - Protective layer for cementitious surface.
 - Injection into concrete/rock structures in the form of cement slurry.
 - As a mortar or slurry coating for better resistant to chemical attack.
- It is also recommended for use in mortars for tiling over gypsum plaster or panels.
- As a bonding agent, it is used as a mixing liquid with KEM TILE GROUT for improved water resistance and when used with sand cement to produce mortars, floorings, it provides extra flexibility and water resistance.
- For use in internal or external application of thin and thick bed tile adhesives & mortars.

Advantages

- Improves bond strength and waterproofing of cementitious mortars.
- It enhances the flexibility of mortars to compensate for thermal movements and thermal shocks minimizing the cracking problems in rendering or tile mortars.

- Allows trapped vapour to escape thus preventing peeling and blistering.
- Develops excellent bond to most building materials.
- Reduces or prevents salt penetration into concrete.
- Is not affected by ultraviolet light or by chemicals ranging from mild acids to strong alkalis.
- Is highly durable in continuous wet condition.
- Is non-flammable and does not give off toxic gases, when exposed to fire.

Typical Properties

Colour: Bluish white/milky liquid polymer.

Density: 1.05 ±.02 kg/litre.

Minimum film forming temperature: 5^o C

Solid content: 30± 3 (w/w)

pH Value: >7

Typical Properties of Cementitious Tile Adhesive Modified by Using KEM PROCRETE

Wet Density : 1650 KI/m³.

Pot Life: 2 hrs.

Tensile Adhesion As per BS 5980: 1980 Class AA: 14 days 1500N.

Shear Adhesive Strength: BS 5980: 1980 Class AA: 20.5 kN

Shear Bond Strength: ANSI A 118.4 1985 F- 6.2.5: 3.2 Mpa,

Compressive Strength: A 118.4 1985 F-8: 34 Mpa.

Linear Co-efficient of Thermal Expansion (ANSI I C 531-81): 65 x 10^{-7o} F 117 x10^{-7o}C.

Service Rating: Extra Heavy.

Bond Strength: 2 times more than normal cement slurry coating

Waterproofing: 10 times higher than the normal cement slurry and mortar under same workability and curing

Standards

The performance standards of KEM PROCRETE for conformance and testing are:



ASTM - C - 1042-85 Type-II, ASTM 1059

ANSI-A -118.4-1976 emulsion Portland cement mortar.

It also meets and exceeds the water resistance and bond strength requirements of:

ANSI-136.1-1972 - Organic Adhesive.

ANSI-118. 1-1972-Dry set Portland cement mortar.

Direction for use

As a Bonding Agent:

Do not dilute with water or solvents of any kind. Pour liquid into suitable container ready for application on to previously prepared substrate. Surface preparation is a key step in successful repairs. Mechanically remove all contaminated loose or damaged concrete. Expose full circumference of any corroded reinforcement bars.

All fine dust and debris should be blown off with oil free compressed air. Pre-soak the repair area thoroughly with water prior to application of KEM PROCRETE as a primer. Remove excess water with a stiff brush. KEM PROCRETE is applied using a stippling action working well into the substrate. Do not allow puddling as this may cause slippage of the repair mortar. Apply repair mortars whilst the primer coat is still tacky. Surfaces that have dried out should be re-primed again.

As an admixture for cementitious Mortars:

KEM PROCRETE modified cementitious mortars are waterproof and have excellent mechanical properties.

This may be suitable for water-soaked areas such as fountains, swimming pools etc. A typical mix design is given below.

Cement	: 1 part
Fine sand	: 2 parts
KEM PROCRETE	: 0.20 parts
Water	: To adjust to desired application consistency.

As a Curing Aid:

KEM PROCRETE can be used as a curing aid whilst using repair mortars. It is applied by brush when the mortar surface has dried enough to receive it.

As an additive for Tiling Mortars and Grouts:

KEM PROCRETE can be used as additive for cementitious tiling Mortars and grouts to improve

thermal shock resistance and waterproofing characteristics. Please refer to respective datasheets, for its usage an application.

As Polymer Additives for Thin Set Mortar:

For fixing all kinds of ceramic tiles and natural stones. The mix design given below is used as a slurry bond coat for thick set application and as adhesive for thin set application. It is recommended for use in interior as well as exterior application over cement concrete, ceramic tiles and masonry surface and for water resistant applications such as swimming pool etc.

Mix Design

KEM PROCRETE: Upto 1 kg for desired consistency.

Portland Cement: 2 to 2.5 kg

Bond Coat & Rust Passivator Coat: 1:1 by volume of cement & KEM PROCRETE.

Polymer Modified Mortar: 50 kg. cement, 125 kg. zone II sand, 10 lt. KEM PROCRETE, 5 to 7 lt. water
Yield: 0.1 cu. mt. Refer guideline for further details.

As waterproofing

Surface Preparation: Prior to application of KEM PROCRETE, surface must be prepared as mentioned below to avoid failure and to achieve maximum beneficial properties.

- The surface shall be cleaned to remove all dust, dirt, loose materials or any contamination which could affect the bond between the surface and the KEM PROCRETE coating. This can be done by scarifying, grinding, water jetting, light grit blasting, and acid etching or by any other non-impact method.

- New flat surface like sub-base concrete shall sufficiently leveled. Avoid exposed aggregates with sharp edges.

- All concrete surfaces shall be pre-wetted by pouring or spraying prior to the application of KEM PROCRETE coating. Water may be ponded for 24 hrs prior to application on horizontal surfaces or use of wet gunny bags or hessian is recommended.

- While placing KEM PROCRETE coating, all surface water should be removed so that surface is only



damp. Standing water or puddles are not acceptable.

- Level and surface undulations by using following mix.

1 kg cement: 1.5 kg clean, dry silica sand: 0.50 kg of KEM PROCRETE.

Application KEM PROCRETE coating: Mix 1 part of KEM PROCRETE with 2 parts of neat cement by weight. Stir the mix until homogenous, lump free slurry is obtained. Any lumps shall be either remixed or removed. Allow to stand for 5-6 minutes for attaining desired consistency and air removal. Apply by brush on prepared surface. Two or more coats are generally recommended. First coat should be allowed to air dry for 5-6 hours prior to application of subsequent coat.

CURING: Allow the applied coating to dry for 2 to 8 hrs, depending on the ambient temperature. During this period no water shall be used for curing. During hot weather, low Relative humidity and / or highly windy conditions, the coating shall protect from quick evaporation, by covering it with polythene sheet. After maximum period of 8 hours after the final application, moist curing shall be done for the next 24 hours by spraying/sprinkling clean soft water over the dried KEM PROCRETE COATING. Ensure that the coating is not immersed in water or left to dry. After completion of moist curing, the KEM PROCRETE coating shall be allowed to air dry for at least 48 hours, before permanent immersion in water.

Coverage

1.5 to 2 m² at 1 mm DFT, when applied in above ratio. Coverage will depend on surface profile.

Packaging

30 kg, 50 kg and 200 kg

Storage and Shelf life

Storage: Stored in dry conditions at moderate temperature and humidity. Protect product from frost.

Shelf Life: 12 months

Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

Safety precautions

Limitations: Do not use if temperature is below 5°C, during rain or if rain is expected within 12 hrs of application.

Cleaning: All equipment must be cleaned with water immediately after use. Mixes containing this product must not be emptied into drainage systems.

Protection: All work must be protected from rain, frost until fully hardened.

Fire resistance: KEM PROCRETE is not flammable.

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