



ACRYLIC WATER-RESISTANT MODIFIER AND BONDING AGENT



RAMKA
CONSTRUCTION
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FLEX® is a water-based, cement modifier admix/internal bonding agent that enhances the performance properties of cementitious mortars and coatings. And when you add it to the mix, it forms a plastic matrix, or film, that helps retain water and promotes cement hydration, resulting in improved compression (crushing) strength without wet curing. It gives Portland cement and gypsum mixes greatly improved tensile and flexural strength, flexibility, and maximum adhesion to old or new concrete surfaces for patching, grouting, or coating. FLEX increases the abrasion, chemical, and water resistance of these mixes making them ideal for application on floors, ramps, sidewalks, masonry walls, etc. It is classified as a non-reemulsifiable bonding admixture.

Applications

- Bond to old and new concrete, brick, concrete block, wood, stone, tile, and clean steel
- Thin overlays to repair, pitch, or level existing floors
- Bedding mortars for tile, flagstone, brick, etc.
- Pointing mortars
- Slurries for anti-rust sealing and cold joint bonding
- Tank, pipe and pool linings
- Terrazzo
- Treads and landings on steel stairs

Approvals / Standards

- ASTM C1042
- ASTM C1059-Type II

Advantages / Benefits

- Increased adhesive bond strength
- Improved flexural and tensile strengths
- Improved abrasion resistance
- Reduced shrinkage
- Improved crack and chip resistance
- Improved water resistance
- Can be totally submerged after curing
- Resists staining and discoloration
- Resists lifting, spalling or crumbling after repeated freeze-thaw cycles
- Does not yellow or break down in sunlight
- Does not require damp curing

Guideline for Use

SURFACE PREPARATION

Applying Concrete/Mortar: Remove all deteriorated concrete, dirt, oil, grease, and all bond-inhibiting materials from surface. Be sure repair is not less than 1/8 in. (3.2 mm) in depth. Preparation work should be done by high pressure water blast, scabbler, or other appropriate mechanical means to obtain an aggregate fractured surface with a minimum surface profile of 1/16 in. (1.6 mm). Saturate surface with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.

MIXING

As admixture/mixing solution: With mixer running, add materials in the following order: FLEX solution and then the cement-based product. Replace the amount of water recommended by the product. Do not dilute with water.

As a bonding grout: With the mixer running, add in the following order. FLEX solution,

aggregate, cement. The ratio is 1 part cement, 2 parts sand, and a sufficient amount of undiluted FLEX to produce a creamy paint consistency.

As a primer for acrylic coatings: No dilution is required. Use as is.

APPLICATION METHOD / TOOLS

Admixture: Immediately trowel FLEX mortar or concrete mix into areas to be patched. Do not over finish. As soon as the application is done, to prevent damage, cure with damp burlap and/or white pigmented polyethylene film. Curing should continue for 24 hours. Pre-testing is recommended when adding FLEX to a specific mix design to assure the results required.

Bonding Grout: Brush grout into area to be resurfaced with stiff-bristled broom or scrub brush. Be sure entire surface and all edges are coated. Apply topping immediately over scrub coat before the bonding slurry dries.

Primer (for acrylic coatings only): Apply undiluted FLEX to prepared concrete substrate using brushes, rollers, soft brooms, or spray.

Product Information

Homogeneity	Homogenized
State	Liquid
Appearance / Color	White
Packaging	20KG Plastic Can / 1100KG IBC Container
Density	1.03±0.03 kg/l at 20°C
PH-Value	3-8
Recommended Dosage	5 – 25% by weight of cementitious
Shelf Life	12 months from date of production if stored properly in undamaged unopened, original sealed packaging
Storage Condition	Store in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

FLEX must be tack-free (film formation) prior to coating. FLEX primer may be applied up to 24 hours ahead providing the area is kept dry and clean. Very porous concrete may require a second coat of FLEX to seal the surface.

Storage

This product must be stored in original containers at above +5 °C under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage condition contact RAMKA Technical Services Department.

Basis Of Data

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Limitations

- Do not use in conjunction with air-entraining products when used as an admixture.
- Pre-testing is recommended when adding **FLEX** to a mortars or concrete of untested mix designs to characterize and verify desired results are achieved.
- Minimum application temperature: 7 °C (44 °F).
- Discard material if frozen.
- Mortars or concrete must be applied immediately over FLEX bonding grout, working “wet on wet”.
- Avoid over-working or over-finishing surfaces of modified mortars or concrete

legislation under the guidance of the local waste regulatory authority.

Additional Information

For additional information on FLEX admixture, consult to our Technical Services Department.

Precautions

Health and Safety

FLEX does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Fire

FLEX is water based and non-flammable. Cleaning and disposal Spillages of FLEX should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities of water. The disposal of excess or waste material should be carried out in accordance with local



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Important Notes: The information, and, in particular, the recommendations relating to the application and end-use of RAMKA products, are given in good faith based on RAMKA's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with RAMKA's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. RAMKA reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.