WATER PROOFING.INSULATION.EPOXY FLOORINGS & COATINGS.STRUCTURAL & CIVIL REPAIR SPECIALIST.
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## CF POLYMER

CF Polymer is a modified acrylic emulsion polymer specially designed for modifying cementitious compositions. Cement Mortars modified with CF Polymer are hard, tough and durable compared with unmodified mortars. They are especially useful where thin sections are desirable and where excessive vibration and heavy loads are encountered.

CF Polymer Modified cement mortars have excellent adhesion to a variety of surfaces such as concrete masonry, rbick, wood, metals etc.

#### **ADVANTAGES:**

- Cement mortars, flooring, plasters modified with CF Polymers have superior flexural compressive adhesive and impact strength, as well as excellent abrasion resistance.
- CF Polymers has excellent waterproofing capability and widely used for water proofing of floors rooftops, basements and maintenance of seepage and leakage. It can be used for crack filling and as title jointing compound mixing with white cement.
- CF Polymer modified cement mortars doesn't require wet curing as CF Polymer hold the water in the system sufficient for cement curing.
- CF polymer increases workability of he mortar at one side, at other side thin section dry rapidly.
- CF Polymer modified cement mortars are resistant to many industrial chemicals, U/V rays and heat.

## PHYSICAL PROPERTIES:

Appearance : Milky white emulsion.

Solid content (150°c/ 20 min.) :47.0=0.5%

pH when packed :9.5-10

Viscosity :160 cps. Max

(Brookfield LVF#1/60 @  $25^{\circ}$ c) :

Film test (draw down 250-micron ambient temp.) :Clear, free from buts, slightly tacky

MFFT :10°c -12°c

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Specific gravity of emulsion (typical) :1.058

Film casting test @54<sup>0</sup>c dried overnight : flexible doesn't crack on rolling.

## **OTHER HIGHLIGHTS:**

CF Polymer cab be used to formulated two component cementitious metal primers that provide low cost excellent protection for both interior and exterior substrates. The cementitious primers based on CF Polymer are essentially without odor, flammability or other hazard inherent with solvent-borne systems some of the major advantages include:

- Excellent corrosion and water resistance.
- Complete flash and earl rust resistance.
- Protects rusty as well as clean metal.
- Cures in damp enclosed areas.
- Excellent adhesion to metal.
- Outstanding flexibility.
- Excellent whetherability.
- Solvent free composition.
- Ambient cure.

#### **APPLICATION ADVANTAGES:**

Cementious metal primers modified with CF Polymer can be brushed. Rolled and air or airless spray applied. Thick films can be easily applied without sag as these primers are high in solids. Key feature is that CF Polymer modified cementitious primers will cure in very damp. Enclosed area and still maintain rust resistance properties. With other water borne primers, the water must evaporate for film cure. But with cementitious coatings, the water is actually used in the film cure as the cement hydrates. Therefore moist conditions have little effect on cemenntitious coatings.

To prepare CF Polymer modified cementitious coatings, the fray ingredients (filler/cement) in one pack are easily mixed with the liquids (Indofil MC76/ defoamer/water) in the other pack. A power mixer is normally used, but good hand mixing is also acceptable. The dry component should be added slowly to the liquids and thoroughly mixed for about two to four minutes. Additional water can be added until the consistency is suitable for either brush or spray application. Once the mixture is prepared. The pot life is abut 4 hours.

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## **PERFORMANCE ADVANTAGES:**

A thin section of cement is very hard and brittle. It will not adhere to a metal substrate. But hydrated Portland cement mortar, modified with CF Polymer, does passes good adhesion and flexibility on clean blasted or marginally prepared rusty metal substrates.

#### **FORMULATIONS:**

1. A Series of three formulations were developed containing 10, 20 and 30% o9f soli8d, CF Polymer based on the weight of cement.

Ingredients		Part	Parts by weight		
Polymer level %		10	20	30	
Silica Flour 120	Pre-blend	200	200	200	
White Portland Cement		100	100	100	
CF Polymer (47%)		21.3	42.6	63.9	
Nopco NXZ	Premix	0.1	0.2	0.3	
Water					

Instructions for Preparation of Formulations:

A power mixer is normally used to prepare the dry blend. But good had mixing is acceptable. A portion of the CF Polymer liquid premix is added to the mixing container to cover the blade. The dry mix is slowly added to the liquid until the mixture has a thick better consistency. This procedure is followed until all of the dry material and about 90-95% of the liquid premix have been blended. The remaining latest mix is added to the mixture until the consistency is suitable for trawal, brush or spray application. Care being taken not to make the mix too soupy. Once the complete formulation has been prepared, it should be used up in from three to four hours.

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# Tables Demonstration properties of these Cementitious Coatings. Adhesion to Concrete Blocks

Solid MC-76 level %	10	20	30
Solid Mic-70 level 76	10	20	30
Coating Thickness(Mils) Adhesion:	20-25	20-25	20-25
Two Days Room Temp Dry	Excellent	Excellent	Excellent
Two Days Room Temp Dry	Excellent	Excellent	Excellent
+ 1 Day water Soak			
7 Days Room Temp. Dry	Excellent	Excellent	Excellent
7 Days Room Temp. Dry	Excellent	Excellent	Excellent
+ 1 Day Water Soak			

## 2. Starting point formulation for cememntitious metal primers based on CF Polymer

Materils	Weight Ration	Volume Ratio
Silica Flour 120	200	17.85
Portland Cement Type 1	100	7.58
CF Polymer (47%)	63.8	7.25
Defoamer 0 <sup>2</sup>	0.3	0.4
Water (for silica flour)	90	10.79
Formulation Constants		
Solids Content	%	72.7
% solid polymer on cement		30
Aggregate / Cement ratio		2/1

## 3. Bonding Coat on old and damaged concrete or on reinforced steel:

1.0 part of CF Polymer and 1.25 pars of grey cement or white cement mix together in the form of slurry and apply two coats of this slurry on the surface. Please not addition to be done just before application.

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#### 4. Mortar for restoration of old concrete structure:

Analyse dampness of the old structure, remove all old concrete structure and level up these areas by modified mortar. Before filling or leaving this area by mortar apply two coats of bonding coat as specified above. 1.00 parts of CF Polymer 5:0 parts of cement. 15:00 parts of quartz sand and mix together and make mortar to fill all damp surface. On complete filling level entire area uniformly. Top of it give a thin bonding coat.

## 5. Plastering of concrete surface:

Mix 2.5 kg of CF Polymer in 15:00 ltr. of water mix 50 kg. cement in this solution and use this slurry for plastering work, which will impart waterproofing properties.

For details call us or write us.

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