

MASTERCREE M-81

100% ACRYLIC CEMENT MODIFIER

MASTERCREE M-81 is a single component 100% acrylic polymer admixture specially developed to improve the properties of cementitious compositions. When it is used with combinations with standard quality of cement, it enhances the mechanical properties such as bonding (adhesion) with various building materials, flexural, compression and impact strength. It improves the thin section fragility of cement when used as coating.



Technical Description

Physical Properties

Properties	Specification	Test Value
Appearance	Milky white free flowing liquid	Milky white free flowing liquid
Viscosity on B4 at	ISO-101	ISO-10
pH value at 30 °C	ISO-101	9 - 10
Solid content		30% (+ 2%)

Mixing Ratio

For coating	-	Cement: MASTERCREE M-81 2:1 parts by weight
For mortars of repair of RCC members	-	15-20% by weight on cement quantity
For flooring screeds	-	18-20% by weight on
For cement paints	-	3-4 ltr./50 Kg. bag of cement
Bonding coat	-	Cement: MASTERCREE M-81 1:1 parts by weight
Initial setting time	-	24 Hrs
Initial curing time	-	72 hrs with moist cloth or water spray
Complete curing time	-	7 days under water immersion

Drying Characteristics

Mechanical Properties

Compressive strength (Kg/cm ²)	IS 4031-88	Max 80%
Impact resistance. inch/lb	-	15 + 5
Abrasion resistance	ASTM-D-4213-83	2% max
Resistance to chemicals	ASTM-C-672	Passes
Water permeability	ASTM-E-96/DIN1048	Satisfactory

Chemical Properties

Features / Advantages

- MASTERCRETE M-81 is easily mixed with cement, cures to hard, tough, weather resistant surface & bonds strongly to most of the building material
- MASTERCRETE M-81 can be over coated by exterior emulsion coating or cement-based paints. It can be applied to a uniform thickness coating on horizontal and vertical surfaces
- MASTERCRETE M-81 allows trapped water vapor to escape and prevents blistering and adhesion failure
- It makes cement mortars or coating compact thus preventing salt penetration into concrete
- It is unaffected by UV light and prevents discoloration of concrete and corrosion in steel due to its alkaline nature. It is resistant to water, dilute acids and alkali solutions. Coating is highly durable even in continuous contact with water
- It is non-flammable, non-hazardous, does not evolve toxic gases when exposed to fire. Non-toxic to human being
- Resist to bacteria, fungus and growth of microorganism provided by good quality of water

Typical Application

- Waterproofing of building terrace, toilet sunken portion, basements, waterproofing of water tanks and swimming pools
- Bridge decks, traffic aprons, runway, parking garages, industrial or factory floors, balconies, mechanical rooms, side walls. etc.
- Pools and foundations, reservoirs, channels dams, water tower, tunnels etc. Sewers, silos, foundation walls, swimming pools etc.
- Repairing of concrete & masonry walls- internal, external and terrace roofs by cement mortars
- Protection of concrete against corrosion and efflorescence
- As an additive with cement paints, which improves waterproofing property,
- coverage by 20-25% and life of cement paint
- As a bonding agent for old concrete and new concrete

Surface Preparation

It is the most important step before application to get best results and to avoid failure.



1 The surface must be free from dust, coatings, loose particles, fungus, moss, oils, and mould release agents



2 Clean the surface by scrapping, sand blasting, grinding to remove dirt & loose particles



3 Treat the surface with 5 to 10% hydrochloric acid followed by complete neutralization with water which will improve bonding of the coating



4 Oils, greases and mould release agent can be cleaned with solvents

A. BRUSH COATING APPLICATION



For waterproofing of terrace, toilet blocks, swimming pools, water tanks and basements.

1. After surface preparation pre-wet the surface with sufficient water
2. Allow the surface to dry for minimum 1 hour. Mix 2 kg of cement with 1 liter of MASTERCRETE M-81 homogenously till no lump or air bubble remains in the mix
3. Apply coating by brush and allow it to dry for 2 hrs. before application of second coat. Minimum 2 coats are required

B. CEMENT PAINT ADMIXTURES



1. Mix 3-4 liter of MASTERCRETE M-81 with 50 kg of cement paint homogeneously to form a uniform mix
2. Apply the mixed and diluted cement paint by brush
3. Allow to dry 2 hrs. before application of second coat
4. It increases the covering capacity of cement paint by 20-25%

C. PATCHING MORTAR



Depressions, voids can be filled and leveled by using MASTERCRETE M-81 mortar. Use 10% of Master Crete on cement weight.

Curing Of Mastercrete M-81 Coating & Mortar



1. MASTERCRETE M-81 coating should be protected from movements of traffic for at least 48 hrs. and kept moist for the next 24 hrs by sprinkling of water or covering with wet gunny bags. Continue the moist curing for at least 72 hrs. before submersion or ponding in water
2. Curing must be continued for minimum 7 days before exposure to weather. Ponding with water for 48 hrs

Coverage

- As a bond coat (1:1 ratio) - 50 - 60 sq. ft./ 1 coat (it may vary depending upon the substrate)
- As a coating (2:1 ratio) - 25-30 sq. ft./ 2 coats (it may vary depending upon the substrate)

Cleaning of Tools and Equipment

- Tools and equipment's can be **easily cleaned with water**

Packing



1 Litre



5 Litre



20 Litre



50 Litre



200 Litre

Storage & Shelf Life

- Store the material in **cool and dry place**
- Shelf life is **24 months**