

Acrylic Polymer Based Waterproof Coating for Concrete & Masonry

Description

Unicrete MAST'O'CRETE 302 is a single component, ACRYLIC based polymer, consisting of polymer and liquid additives. It can be used as a waterproof membrane for terraces, balconies and roof slabs. It accommodates limited crack movement in underlying surfaces. It develops an excellent bond to most building material hence becoming a part of concrete repair.

Uses

MAST'O'CRETE 302 polymer in conjunction with cement provides a seamless waterproof coating to concrete and masonry surfaces. It can be used as a waterproof or protective coating and concrete repairs.

- Waterproofing: Concrete structures like sunken portion, toilets, balcony, basement, chajjahs, terrace etc.
- Surface Treatments: Protection of Concrete & Masonry against corrosion, salt attack etc.
- Concrete Repairs: Spalled concrete of slabs, Beams, Columns, Parapet, floors etc.

Advantages

- Multipurpose, UV Stable & Economical
- Fast application thus reducing labor cost.
- Provides Tough, hard wearing breathable waterproofing system for residential, industrial & commercial buildings.
- Allow trapped vapor to escape thus preventing peeling and blistering of surface coating
- Excellent workability & Consistent Quality
- Excellent Bond adhesion to various building material substrates.
- Reduces or prevents salt penetration into concretes.
- Uniform thickness application on horizontal as well as vertical surfaces.
- No effect ultraviolet light or by chemicals ranging from mild acids to strong alkalis.
- Provides highly durable film in continuous wet environment
- Provides anti - bacterial coating, inhibits growth of any kind of fungus or bacteria
- Non - flammable and does not emit toxic gases when exposed to fire
- Non - Hazardous to workman.

Technical support

Unicrete provides a technical advisory service support by a team of specialists in the field.

Technical Properties

Properties	Typical Results
Appearance	Free following liquid
Color	Milky White

Chemical Base	Acrylic Co-Polymer Base
Specific gravity @ 25°C	1.02 ± 0.01
pH-value	6 - 8
Solid content	32 % ±2
Bond Strength with concrete @ 14 days	> 1 N/mm ²
Application temperature	10° C to 35° C
Full Cure	14 Days

Note: The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field - applied samples may vary, dependent on actual site conditions.

Typical Application Information* Yield / Coverage

1. Mast'O'crete 302 Waterproof Coating

Mix Proportion Cement: Mast'O'crete 302= 2 :1		
Material	1 coat on concrete kg/m²	2 coat on concrete Kg/m²
Cement OPC	0.5 kg	0.76 kg
Mast'O'crete 302	0.25 kg	0.38 kg
Recommended Water Addition	0 Kg	0 kg
Consistency	Brush able Slurry	
Recommended Coats	Minimum 2 Coats perpendicular to each other	
Advisory : Add Powder to Liquid (not vice versa)		

2. Mast'O'crete 302 Topping

Mix Proportion Cement :Silica Sand : Mast'O'crete 302 = 2 : 2 : 1		
Material	Quantities of Material for	
	1 cubic meter	1 sq. m for 1.5 mm thickness
Cement OPC	880 kg	1.30 kg
Fine Silica Sand	880 kg	1.30 kg
Mast'O'crete 302	440	0.65 kg
Recommended Water Addition	0 Kg	0 kg
Total Weight in Kg	2200 kg	3.25 kg
Consistency	Mortar Consistency	

3. Patching/ Repair Mortar

Mix Proportion Cement :Sand : Mast'O'crete 302 = 2 : 3 : 1	
Material	Weight
Cement	1 kg
Silica Sand	1.5 kg

Mast'O'crete 302	0.5 kg
Recommended Water Addition	Up to 40 % by weight of cement
Consistency	Mortar Consistency
Recommended thickness	10 to 20 mm

4. For Repair Works

Mix Proportion Cement : Sand = 1 : 3	
Material	Weight
Cement	50 kg
Zone II sand	150 kg
Mast'O'crete 302	5 – 8 kgs
Recommended Water Addition	Up to 40 % by weight of cement
Consistency	Mortar or Cohesive Consistency

***Note:** Mixing Ratios mentioned above are typical mix and guiding in nature, and may vary depending upon mix constituents. Coverages may vary, & depend on the porosity, undulations of the surface and application rate. The Coverages mentioned here are for reference only and calculated under lab trials. UNICRETE strongly advises our customers to make trials in sample first to check coverage as per their application & usage before going to full scale applications.

Chemical Resistance:

Cementitious based materials have limited chemical resistance. The addition of Unicrete Mast'O'crete 302 to cement mortars reduces permeability and therefore helps reduce the rate of attack by aggressive chemicals.

Application Instructions:

Before application of MAST'O'CRETE 302, surface preparation should be done as per the procedure given below in order to achieve maximum beneficial properties and to avoid failures.

Surface Preparation:

- The surface shall be cleaned to remove all dust, foreign matters, loose materials or any deposits of contamination which could affect the bond between the surface and the coating. This can be done by scarifying, grinding, water blasting, sand blasting, acid washing or by any other approved method.
- New flat surface like sub-base concrete shall be made reasonably smooth so as not to impede the application of MAST'O'CRETE 302 coating and to avoid sharp projections.
- All concrete surfaces shall be thoroughly pre-wetted for at least one hour prior to the application of MAST'O'CRETE 302 coating by pouring water on flat surface or by vigorously spraying water on vertical/inclined surfaces. Ensure that surface is in SSD Condition.

Priming

Priming of surface is required by diluting 1 part of MAST'O'CRETE 302 to 1 part of water before further application.

Surface Leveling:

- Primary inspection of surface is to be done to see any type of depressions on the surface.
- If found, depressions are to be filled and leveled using MAST'O'CRETE 302 modified repair mortar (Mix design as mentioned in application chart).

Waterproofing Coat:

- Prepare the slurry coat as per mix design mentioned in application chart.
- Mix to a lump-free creamy, consistency for 2-3 minutes by slowly adding Powder in to MAST'O'CRETE 302 (not vice versa).
- Using a stiff brush or roller, work first coat of waterproofing slurry well into the damp surface.
- After the first coat has dried, apply second coat at right angle to first followed by mortar/screed overlay. Average time gap between two coats is 5 to 6 hours.
- Standard waterproof coating system, is further reinforced by placing nylon fiber mesh between 1st & 2nd coat

Curing

- During first 12 hours of curing, coating must be protected from abrasion, rain and other adverse conditions. No traffic shall be allowed on treated surface within 48 hours after application
- After application of final coat of MAST'O'CRETE 302, initial air drying shall be done for 2 – 6 hours. During this period no water shall be used for curing.
- In case of high temperature and low humidity combined with the high wind conditions, the coating shall be covered with polythene sheet to avoid rapid drying of the coating
- Moist curing of coating shall be done after 6 hours of final application coat for next 24 hours by sprinkling of potable water only.
- During this period at no point of time coating should be left completely dry or submerged in water. Following moist curing, the MAST'O'CRETE 302 coating shall be allowed to air dry for 3 days before submersion in water

Screeds & Toppings, applied to Horizontal Surfaces

- MAST'O'CRETE 302 polymer modified bonding slurry is applied to the prepared surface
- MAST'O'CRETE 302 modified mix of screed material (mix design as per application chart) should be placed over the still wet bonding slurry, well compacted by hand and troweled to finish using a wooden float or steel trowel
- Curing of mortar is done as per good construction practices after 24 hours for 3 to 4 days.

Cleaning:

Tools & equipment should be washed with water immediately after use.

Additional Guidance

- Recommended dosage to be followed to achieve desired results
- MAST'O'CRETE 302 system must be applied with temperature range between 10°C to 35°C
- All surfaces should be structurally sound, and should be prepared as per instructions.
- Before installation surface should be in SSD conditions.
- Overlay the coating with a protective screed to the desired slope & thickness.

Note:- In order to realize all the product advantages, for high quality construction & best performance, it is necessary to follow the Manufacturer's instructions or relevant codes and good practices.

Pack Size:

MAST'O'CRETE 302 is available in 1, 5, 20, 50 and 220 kgs HDPE containers.

Shelf Life & Storage

Best before 24 months from the date of manufacture when sealed pack stored in dry place. Keep away from direct sunlight. Do not allow to freeze.

Health and safety instructions

Unicrete MAST'O'CRETE 302 is non-toxic. Any splashes on skin should be washed well with water. If contact with eyes occurs, it shall be washed well with plenty of water and medical advice sought immediately.

Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment during application. Keep out of reach from children.

Fire

Unicrete MAST'O'CRETE 302 is non-flammable.

Disclaimer

The information, and, in particular, the recommendations relating to the application and end-use of Unicrete products, are given in good faith based on Unicrete's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Unicrete'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.

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For More Details Contact:

UNICRETE Technical Services
UNICRETE materials are available across INDIA
Unicrete Building Solutions India Pvt Ltd
KH- 58, Dhatari Industrial Area, Gt Karnal Road
Sonipat, Haryana
Email: - info@unicrete.in
Toll Free: - 1800- 572-0908