

SBR Latex for Waterproofing & Repairs

Description:

Unicrete LATEX 705 is a milky-white, Styrene butadiene latex used for high performance applications in waterproofing and repairs. When added to cement slurry/ cement mortar/ concrete / grout provide good adhesion and waterproofing properties. It reduces mixing time through high dispersion of the polymer and improves waterproofing, new to old concrete/ plaster bonding and strength characteristics and reduces shrinkage and cracking of the mix.

Advantages:

- **Multipurpose:** Robust product serves as a bonding, repair, modifier, and waterproofing agent in contentious systems.
- **Easy to Use:** Economical, single component and stable system.
- **Workability:** Provides excellent workability to mortars with consistent quality.
- **Waterproofing:** Standard waterproof coating system, can be further reinforced by placing fiber mesh between 1st & 2nd coat. Thus, provides durable waterproofing film in continuous wet environment.
- **Durability:** Improves flexibility, elasticity, and tensile strength of cement mortars.
- **Cohesiveness:** No bleeding, lower water-cement ratio, and high resistance to water penetration.
- **Corrosion control:** Prevents corrosion of embedded steel.
- **Crack control:** It prevents cracking by improving flexural strength.
- **Reduced Permeability:** Provides waterproof screeds, plasters, and sealing slurries.
- **High Adhesion:** Excellent Bond adhesion to concrete, masonry, stonework, plasters, screeds, etc.
- **Rebound Loss:** less material wastage- material does not fall back/rebound, when used as bonding coat.

Technical support:

Unicrete provides 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	SBR Latex – (Styrene Butadiene Rubber Latex)
Specific gravity @ 25°C	1.02 ± 0.01
pH-value	6 – 8
Application temperature	10°C to 35°C
Full Cure	14 Days

Note:- The typical physical properties given above are de- rived 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. Waterproofing Coat for Structure:

Mix Proportion Cement :LATEX 705= 2 : 1	
Material	Weight
Cement	50 kg.
Latex705	25 kg.
Recommended Water Addition	0 Kg.
Consistency	Brush able Slurry
Recommended Coats	Minimum 2 Coats Perpendicular to each other
Advisory : Add Powder to Liquid (not vice versa)	

2. Bonding Coat for Structure:

Mix Proportion Cement : LATEX 705 = 1 : 1	
Material	Weight
Cement	20 kg.
Latex 705	20 kg.
Recommended Water Addition	0 Kg.
Consistency	Brush able Slurry
Recommended Coats	Minimum 2 Coats perpendicular to each other
Advisory : Add Powder to Liquid (not vice versa)	

3. Repair & Patching Mortar:

Mix Proportion Cement : Zone II Sand = 1 : 1	
Material	Weight
Cement	50 kg.
Zone II sand	150 kg.
Latex 705	5 – 8 kgs.
Recommended Water Addition	Up to 40 % by weight of cement
Consistency	Mortar Consistency
Recommended thickness	10 to 20 mm

4. Screed Concrete/ Mortar:

Mix Proportion Cement : Sand : Aggregates = 1 : 1.5 : 1.5	
Material	Weight
Cement	50 kg.
Sand	75 kg.
4 – 6 mm aggregates	75 Kg.
Latex 705	5 – 8 kgs.
Recommended Water Addition	Up to 40 % by weight of cement
Consistency	Mortar or Cohesive Consistency
Recommended thickness	10 to 40 mm

5. Plasters & Renders Mortars:

Mix Proportion Cement : Plastering Sand = 1 : 4	
Material	Weight
Cement	50 kg
Plastering sand	200 kg
Latex 705	5 – 8 kgs
Recommended Water Addition	Up to 40 % by weight of cement
Consistency	Mortar or Cohesive Consistency
Recommended thickness	Up to 25 mm

Note: Mixing Ratios & Coverage mentioned above are typical mix and guiding in nature, and may vary depending upon mix constituents. UNICRETE strongly advises to carry out site mix design and trials prior to full scale usage.

Chemical Resistance:

Cementitious based materials have limited chemical resistance. The addition of Unicrete Latex 705 to cement mortars reduces permeability and therefore helps reduce the rate of attack by aggressive chemicals.

Application Instructions:

Before application of LATEX 705, 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 strength between the surface and the LATEX 705 coating.
- Surface cleaning process can be carried out by scarifying, grinding, water blasting, sand blasting and acid washing or by any other approved method.
- New flat surface like sub-base concrete shall be reasonably smooth so as not to impede the application of LATEX 705 coating and to avoid any sharp projections.

- Corroded reinforcing steel should be exposed around its full circumference and cleaned to remove all loose scale and corrosion deposits. Use of emery cloth, grit or sand blasting is recommended.

Priming:

- All Cementitious/ concrete surfaces should be thoroughly dampened with clean water and any excess water is removed. Priming of surface is required by diluting 1 part of LATEX 705 to 1 part of water to 2 part of fresh cement before further application.
- Reinforcing steel must be primed with Zinc primer/ LATEX 705 immediately after cleaning.

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 LATEX 705 modified repair mortar.

Bonding Coat:

- Prepare bonding coat in ratio as mentioned in chart.
- Mix to a lump-free creamy, consistency for 2-3 minutes by slowly adding Powder in to LATEX 705 (not vice versa).
- Using a stiff brush, work the bonding slurry well into the damp surface. When the bond coat is tacky apply mortar/ screed overlay.

Waterproofing Coat:

- Prepare the slurry coat as per mix design mentioned in chart.
- Mix to a lump-free creamy, consistency for 2-3 minutes by slowly adding Powder in to LATEX 705 (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 3 to 4 hours.
- Standard waterproof coating system, can be further reinforced by placing fiber mesh between 1st & 2nd coat.

Mixing Process Mortar / Screed:

- Use fresh, lump free cement, well graded sand/aggregates free of excessive fines.
- Mix sand and cement and coarse aggregate in Pan Type mixer for 1 -2 minutes. Hand mixing is only permissible when the total weight of the mix is less than 25kg.
- Mix required quantity of LATEX 705 and water for 2 minutes in a separate container, to avoid excessive air entrapment.
- Finally, without delay, add the liquid mix slowly into the mixer containing the mixed powdered sand/coarse aggregate and cement until the required consistency is achieved.

Rendering to vertical surfaces:

- LATEX 705 polymer modified bonding slurry is applied to the prepared surface.

- LATEX 705 modified render or plastering material is applied on to the wet bonding slurry.
- Application thickness: 8mm to 15 mm. Greater thickness can lead to slumping.
- Apply the material in multiple layers not in single layer.
- Finish the surface using a wooden float or steel trowel.
- First coat should be allowed to air dry for 5 – 6 hours prior to apply the subsequent coat. Apply modified slurry coat on the first layer in case application of second layer is delayed to long gaps.
- Curing of mortar is done as per good construction practices after 24 hrs.

Curing:

Moisture cure for 3 to 4 days and then allow to dry slowly.

Cleaning:

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

Coverage:

- **As a Waterproofing coating:** 20 – 25 sq. ft. / kg in 2 coats.
- **As a Bonding Coat:** 40 – 45 sq. ft. per coat.

Note:- 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 advises our customers to make trials in sample first to check coverage as per their application & usage before going to full scale applications.

Additional Guidance:

- Recommended dosage to be followed to achieve desired results.
- LATEX 705 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.
- LATEX 705 should not be used without addition of cement.

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:

LATEX 705 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 LATEX 705 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 LATEX 705 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. The user of the product must test the product's suitability for the intended application and purpose. Unicrete 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.

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