

MasterEmaco[®] SBR 3

SBR Latex cement modifier ensuring higher mixing efficiency with water reduction for site batched mortars & waterproofing/bonding slurry/screed

DESCRIPTION

MasterEmaco SBR 3 is a milky-white, Styrene-Butadiene co-polymer latex liquid, produced from styrene and butadiene by high pressure emulsion polymerization. When used with cement, concrete and plaster, it reduces the mixing time of the polymer and improves waterproofing, new to old concrete/plaster bonding and strength characteristics and reduces shrinkage and cracking of the mix.

RECOMMENDED USES

Concrete repair: Spalled concrete, repairing floors, beams and pre-cast slabs, chajjas etc.

- **Bond Coat:** For bonding new concrete to old concrete, plaster, stone/brick masonry.
- **Plaster repair:** For repairing plaster or making water proof plaster which is better than normal plaster.
- **Floor screeds and toppings:** Abrasion resistant and non-dusting floors.
- **Waterproofing:** Basements side walls and rafts, lift pits, inspection pits, sunken/overhead water tank, sunken portions of bathrooms and toilets, balconies, chajjas, exposed roofs before finished screed.
- **Other typical applications:** Bedding tiles, fixing or re-fixing slip bricks.

FEATURES AND BENEFITS

- **Multiple applications:** Robust product that is economical, easy to handle and store.
- **Easy to Mix:** Faster mixing to enhance worker efficiency.
- **Shrinkage/crack control:** High flexural / tensile strength to control cracking.
- **Mortar modifier-** Improved flexibility, no bleeding, lower water cement ratio and high resistance to water penetration.
- **Improves physical/mechanical properties** – higher abrasion resistance, good adhesion to building materials similar thermal characteristics to concrete.
- **Corrosion control:** Prevents corrosion of embedded steel.

- **Non-toxic:** Suitable for use in potable water tanks.
- **Dispersion technology:** Allows for better workability at slightly reduced water

PROPERTIES

Aspect	Milky-white, Styrene-Butadiene co-polymer latex
pH	8 ± 1
Relative density	1.02 ± 0.01 at 25°C

Polymer modified mortar:

Mortar proportioning	
MasterEmaco SBR 3	10 Litre
Cement	50 Kg
Quartz Sand (Zone II)	150 Kg
Water	10 Litre
Fresh wet density	2000 – 2200kg/m ³
Compressive strength* (ASTM C 109)	> 25 N/mm ² (28 days)
*Properties are of typical mix and guiding in nature and may vary depending upon mix constituents. MBCC strongly advises to carry out site mix design & site trials.	

Waterproofing Coating:

MasterEmaco SBR3	10 kg
Cement	20 kg
Non-Toxicity (IS 6582)	Passes
Properties are of typical mix and may vary depending upon mix constituents. Master Builders Solutions strongly advises to carry out site mix design and site trials.	

APPLICATION

Surface preparation

- Remove all loose concrete, grease, mould oil or curing compound from concrete and steel surfaces using wire brush, scrubber.
- Saw cut the concrete areas to a square or rectangular profile to a minimum 10mm depth at the extreme edges.
- Roughen the surface free of loose particles and dust and saturate with water.
- Remove excess/standing water.

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Bonding slurry

- Mix 1L **MasterEmaco SBR 3** with 1½ kg fresh cement.
- Mix to a lump-free creamy, consistency for 2-3 minutes by slowly adding **MasterEmaco SBR 3**.
- Using a stiff brush, work the bonding slurry well into the damp surface. When the bond coat is tacky apply mortar/screed overlay.

As waterproofing slurry:

- Mix 1L **MasterEmaco SBR 3** with 2kg fresh cement.
- Mix to a lump-free creamy, consistency for 2-3 minutes by slowly adding **MasterEmaco SBR 3**.
- Using a stiff brush, 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.

Mix Design: Mortar & Screed.

- **Mix Design Repair Mortar:**
1L of **MasterEmaco SBR 3** : 5kg of Cement : 15kg of sieved sand : 1L of water.
- **Mix Design Floor Topping/Screed:**
10L of **MasterEmaco SBR 3** : 50Kg of Cement : 75Kg of sand: 75kg of coarse aggregate (6mm down) : 10L of water.

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 **MasterEmaco SBR 3** 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

- Apply the bonding slurry to the prepared surface and then apply the **MasterEmaco SBR 3** render onto the wet bonding slurry.

- **Application Thickness: 5 to 25mm.**
- Greater thickness can lead to slumping.
- Apply multiple layers in rapid succession, within 15 to 30 minutes of the previous layer.
- Finish the surface using a wooden float or steel trowel.
- Apply modified slurry coat on the first layer in case application of second layer is delayed to long time gaps.

Screeds and toppings, applied to horizontal surfaces

- **Application thickness 10mm to 40mm.**
- The **MasterEmaco SBR 3** modified mix should be placed over the still wet bonding slurry, well compacted by hand and trowelled to finish using a wooden float or steel trowel.

Curing: Moisture cure for 24 hours and then allow to dry slowly

ESTIMATING DATA

Mixing ratio:

Application	Mixing Ratio	Consistency
Bond Coat	1(polymer) : 1.5(cement)	Slurry
Waterproofing slurry Coat	1(polymer) : 2(cement)	Slurry
Repair mortar	1(polymer) : 5(cement): 15(sand) : 1 (water)	Thixotropic
Floor Screeds / PCC Topping	1(polymer) : 5(cement) : 7.5(sand) : 7.5 coarser aggregate : 1 (water)	Thixotropic

Bonding Coat: Approximately 4 to 4.5m² for mix of 1L **MasterEmaco SBR 3** and 1.5kg of cement.

Waterproofing slurry: Approximately 2-2.5 m² in two coats for mix of 1L **MasterEmaco SBR 3** and 2kg of cement.

Repair Mortar/Concrete Screed: 10L of **MasterEmaco SBR 3** per 50kg of cement.

Coverage rate is strongly influenced by nature of surface and its roughness, absorbency and porosity of surface, prior application of putty, temperature and other external conditions. User is always recommended to take site trials before finalizing the estimated data.

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PACKAGING

MasterEmaco SBR 3 is supplied in 1, 5, 20 & 200 Litre.

SHELF LIFE

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.

Shelf life is 12 months when stored as above.

PRECAUTIONS

Please refer the Material Safety Data Sheet for handling and storage of this product.

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