

# EPO LATEX SBR

SBR Based Multipurpose Waterproof Bonding Agent and Mortar Additive



## DESCRIPTION

**EPO LATEX SBR** is a modified styrene butadiene rubber emulsion which is supplied as a ready to use white liquid. It is designed to improve the qualities of site-batched cementitious mortars and slurries. Being resistant to hydrolysis, it is ideal for internal and external applications in conjunction with cement.

## USES

- **Concrete repair:** Spalled concrete, repairing Floors, beams and pre-cast slabs etc.
- **Bond Coat:** For bonding new concrete to old concrete, plaster, stone/brick masonry.
- **Plaster & Mortar repair:** For making water proof plaster and mortar which is better than normal plaster and mortar.
- **Waterproofing:** Concrete additive for basements side walls and rafts, lift pits, inspection pits, sunken/overhead water tank, sunken portions of bathrooms and toilets, balconies, exposed roofs before finished screed.
- **Other typical applications:** Bedding tiles, fixing or re-fixing slip bricks.

## ADVANTAGES

- Single component liquid polymer.
- Can be used to produce waterproof thick mortar tile bedding for swimming pools.
- As an integral admixture used with cement/sand and aggregates. It will produce a wide range of special high quality mortars.
- Mixed with sand/cement, it will produce highly adhesive mortar for bonding extruded polystyrene or insulation panels to concrete.

## PRODUCT DATA

Form	Liquid
Colour	White
Density @ 25°C	1.00 ± 0.05 Kg/Ltr
pH @ 25°C	6 ± 1
Packing	20 Kg plastic Gallon
Consumption (As Bonding Agent)	0.4 kg/m <sup>2</sup> - 0.5 kg/m <sup>2</sup> according to Water/EPO LATEX SBR ratio and application Surface
Shelf Life	12 months indoor, without opening Package

## PERFORMANCE SPECIFICATION

**EPO LATEX SBR** meets the performance requirements of **ASTMC-1059 TYPE II & ASTM C 932**.

## TECHNICAL SPECIFICATION

Typical improvements in mechanical properties of a 3:1 sand/cement mortar using **EPO LATEX SBR** at 20% on cement quantity.

Test Name	Standard	Average Result
Cement	---	50 Kg
Graded Sand	---	150 Kg
SBR	---	10 Kg
Water	---	12 ± 3 Kg
Mix Density	ASTM C138	1.90 ± 0.20 g/cm <sup>3</sup>
Compressive strength 1 Day 7 Days	ASTM C109	> 15 MPa > 20 MPa
Flexural strength	ASTM C580	> 3 MPa
Tensile strength	ASTM C496	> 3 MPa
Setting time Initial Final	ASTM C191	> 4 Hours < 6 Hours
Pull off Adhesion / Bond strength	ASTM D4541	> 1.0 N/mm <sup>2</sup>
Water vapour permeability	ASTM E96	0.27g/m <sup>2</sup> /24Hrs
Toxicity	BS 6920	Non toxic
Shrinkage 28 days	ASTM C157	0.020%
Water absorption	ASTM C413	< 1%
Chemical resistance	ASTM C267	Good

## APPLICATION AND TILES FIXATION

### SURFACE PREPARATION

Remove all loose concrete, grease, mold 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 10 mm 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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## AS BONDING SLURRY

Mix 1 parts cement to 1 part **EPO LATEX SBR** by weight of cement. Mix to a lump-free creamy, consistency for 2 - 3 minutes by slowly adding **EPO LATEX SBR**. Using a stiff brush; work the bonding slurry well into the damp surface. When the bond coat is tacky apply mortar overlay.

## AS WATERPROOFING SLURRY

Mix 1½ parts cement to 1 part **EPO LATEX SBR** by weight of cement. Mix to a lump-free creamy, consistency for 2 - 3 minutes by slowly adding **EPO LATEX SBR**. 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 overlay. Average time gap between two coats is 3 to 4 hours

## MIX DESIGN- REPAIR MORTAR

Mix Design Repair Mortar: 10 Kg of **EPO LATEX SBR**: 50Kg of cement: 150Kg of sieved sand: water to be adjusted to get the desired consistency

## MIXING PROCESS MORTAR

Use fresh, lump free cement, well graded sand/aggregates free of excessive fine. Mix sand in pan type mixer for 1-2 minutes. Hand mixing is only permissible when the total mix is only less than 25 Kg.

Mix required quantity of **EPO LATEX SBR** and water for 2 minutes in separate container, to avoid excessive air entrapment. Finally, without delay, add the liquid mixer slowly into the mixer contains the mixed powdered sand/coarse aggregate and cement until the required consistency is achieved.

## VERTICAL SURFACES

Application Thickness: 5 to 25 mm.  
Apply the bonding slurry to the prepared surface and then apply the **EPO LATEX SBR** Mortar onto the wet bonding slurry.

Greater thickness can lead to slumping. Apply multiple layers in rapid succession, within 15 to 30 minutes of the previous layer. Apply modified slurry coat on the first layer in case application of second layer is delayed to long time gaps.

## HORIZONTAL SURFACES

Application thickness 10mm to 40mm  
The **EPO LATEX SBR** 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. Finish the surface using a wooden float or steel trowel.

**Curing:** Moisture cure for 24 hours and then allow drying slowly



## ESTIMATING DATA

Usage	Mixing Ratio	Consistency
Bond Coat	1(SBR):1(cement)	Slurry
Water Proofing Slurry Coat	1(SBR):1.5(cement)	Slurry
Repair Mortar	1(SBR):5(cement): 15(sand):water (need to adjust)	Thixotropic

## MIXING RATIOS

**Coverage:**

**Bonding Coat:** 4 to 4.5 m<sup>2</sup> for mix of 1 Kg **EPO LATEX SBR** and 1 Kg of cement

**Waterproofing slurry:** 2 m<sup>2</sup> in two coats for mix of 1Kg **EPO LATEX SBR** and 1.5 Kg of cement

**Repair Mortar:** 10Kg of **EPO LATEX SBR** per 50 Kg of cement

## PRECAUTIONS

**Cleaning:** All equipment must be cleaned with water immediately after use. Mixes containing this product must not be emptied into drainage systems.

## HEALTH AND SAFETY

**EPO LATEX SBR** is non-toxic and non-flammable liquid, but it is mildly alkaline. Gloves should be worn during application. Splashes to the skin or eyes should be removed with clean water. In the event of the prolonged irritation, seek medical advice.

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