



## KEM BOND SBR

### Multipurpose Latex

Ref. CR/BA-V1-0112

### Description

KEM Bond SBR is a high quality specification-resistant liquid resin. This emulsion has latex dispersion for improving adhesion and strength of all types of commonly used mortars. When blended with cement, the polymer cement mixture provides an apt barrier coating. KEM Bond SBR has excellent Bonding property to mortars, concrete and brickwork.

### Uses

- Fixing damaged spots in precast concrete industry, pipelines etc.
- Waterproofing water retaining structures, terraces, parapets, bathrooms and sunken portions of toilet blocks
- Strengthening cold joints between old and new concrete and making them non-permeable
- Fixing ceramic tiles, floor screening and mosaic tiling
- Crack repairing and porous surface sealing
- Avoiding conditions created due to breeding of termites
- Eliminating discomfort and ensuring healthy conditions prevail
- Improving mechanical and technological characteristics of coarse and fine mortars.

### Advantages

- Excellent adhesion to most building substrates
- Strength of adhesion to the base is distinctly improved. This allows structural Bonds between existing mortars/concrete and fresh mortar
- Improves flexural, tensile, and thin section fragility of cementitious systems

- Allows breathing thus preventing peeling and scaling
- Gives a tough, hardwearing surface with effective waterproofing
- Economical when compared with epoxy mortars
- Reduces chloride/salt penetration in marine environment
- Resists carbonation effect
- Higher Bond and adhesive strength
- Lower shrinkage characteristics
- Increases overall structural durability
- Cement based materials have limited chemical resistance.

### Typical Properties

**Appearance** : Milky white

**Form** : Liquid emulsion

**Application Temp.** : > 5°C

**Service Temp.** : - 40°C to + 90°C

**Solid Content** : 40 % ± 1

**Pot Life** : Approx. 30 minutes

**Toxicity** : Non toxic

**Resistance** : Resistant to salts, mild acids and strong alkalis between pH 4 to 14

**Specific Gravity** : 1.02 ± .01

**pH** : 7 - 9

**Mechanical Characteristics:** Typical improvements in mechanical properties of a 3:1 sand/cement mortar using KEM Bond SBR at 15% on cement level.

**Water Vapour Permeability:** Less than 4gm/m/24 hrs, through a 10mm thick test piece.

**Coefficient of Thermal Expansion:** -20° C to +20° C : 12.8 x 10<sup>-6</sup> & +20° C to +60° C : 12.9 x 10<sup>-6</sup>.



Resistance to water under pressure - 30m Head : Excellent. No water penetration through a 15 mm thick test piece.

Test		Control	Kem Bond SBR
<b>Compressive Strength</b>	<b>Wet</b>	28.50	36.00
	<b>Dry</b>	23.0	24.00
<b>Tensile Strength</b>	<b>Wet</b>	3.50	5.00
	<b>Dry</b>	2.50	4.00
<b>Flexural Strength</b>	<b>Wet</b>	7.00	10.00
	<b>Dry</b>	6.00	09.50
<b>Drying Shrinkage (%)</b>		0.07	0.02
<b>Adhesion to Concrete – Slant Shear Bond (N/mm<sup>2</sup>)</b>		2.6	20.00

### Standards

KEM Bond SBR meets the performance requirements of ASTM C – 1059-99 - Standard specification for latex agents for Bonding fresh to hardened concrete, Type II.

### Direction for use

Surface preparation of the substrate is vital for effective adhesion and Bonding of KEM Bond SBR. Free the surface of laitance, loose dust particles, oil, grease and other dirt. Oil or grease can be removed by using a strong industrial detergent or organic degreaser. Wire brush and broom the surface before application. In some cases, the existing concrete may have to be chipped to get to the original, sound substrate.

Weigh out 1 kg KEM Bond SBR in a plastic container of 2 litres capacity.

Weigh out 1 kg of fresh ordinary Portland cement.

Add the cement gradually to KEM Bond SBR with constant stirring.

Ensure that the cement forms uniform slurry, without any lumps. Stir constantly until all the cement has been added to KEM Bond SBR. Apply this slurry on the properly prepared substrate using a soft 4-inch wide paint brush. Apply in one direction only. Take extra care while applying the slurry to construction joints and honey combed surfaces. Cover voids, holes or pores well with the slurry. After about 12 hours of air drying of the second coat, sprinkle little water on the coated

surface at an interval of 2 to 3 hours. Continue sprinkling water for at least two days and only then put the surface to use. Curing should be done for at least 24 hours by using moist gunny bags or spraying water on the coated surface area.

**1. Bonding Old Concrete to New Concrete:** 1 kg KEM Bond SBR covers about 30 - 35 sq. ft when mixed with cement and applied in the above described manner.

**2. Repairs of Beams, Columns and Slab:** When using KEM Bond SBR to repair beams, columns or slabs, apply Bonding slurry on the reinforcement as well as the surrounding concrete surface when the Bonding slurry is still tacky, apply modified mortar by pressing it in existing position.

For higher thicknesses, let the first layer dry overnight and then apply one more layer of Bonding slurry.

**3. Screed Mortars and Plaster:** Screeds over waterproofing membranes and patch up repairs before application of waterproofing membranes is done with KEM Bond SBR admixed mortars for achieving higher compressive and tensile strength.

KEM Bond SBR is admixed at a dosage of 1.5 litres per 50 kg bag of cement to improve properties of general plaster and screed free from shrinkage crack. All substrates should be cleaned and free of dust, plaster oil, paint, grease, corrosion deposit and any other deleterious substance. Excess laitance should be removed by mechanical means. Best results are obtained when smooth substrates are mechanically roughened or grit blasted or needle scabbled to provide adequate key for installation of KEM Bond SBR for cementitious mixes..

### Usage guideline

Application	Mixing Proportions		
	Cement (kg)	Kem Bond SBR (kg)	Sand (kg)
As Bonding Aid	1	1	-
As Repair Mortar	5	1	15
As a Coating	2 - 3 m <sup>2</sup> /kg for two coats when mixing is in ratio 1 kg kem bond (5) to 1.5 kg cement		



### Packaging

25 KG, 100 KG and 200 KG

### Storage and Shelf life

Away from direct sunlight.

Shelf life 12 months from manufacturing date.

### Technical Service

ChemBond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

### Safety precautions

KEM Bond SBR is non-toxic, non-flammable and non-hazardous. However, any splashes on any part of the human body, must be washed with plenty of water.

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