

# SMART SBR LATEX

## Bonding Aid/Mortar Additive

**SMART SBR LATEX** is a carboxylated butadiene styrene copolymer emulsion commonly used for bonding old concrete to new concrete or old render to new render mortar. It is also designed for use as a mortar/concrete additive to improve water & chemical resistance. **SMART SBR LATEX** is supplied in ready-to-use, diluted form. No addition of water or solvents is necessary at site.

### ADVANTAGES

- Improves bonding strength
- Increases durability
- Reduce cracking
- Increases abrasion resistance
- Improves cohesion & workability

### USES

- Bonding aid for concrete repair
- Additive for patching mortar
- Additive for concrete topping

### PROPERTIES (Typical Results)

- **SMART SBR LATEX** meets ASTM C1059:86 Type 2 standard specification (for use of latex agent in bonding fresh & hardened concrete).
- The physical properties of **SMART SBR LATEX** are as follows.

<b>pH</b>	6.7
<b>COLOUR</b>	White

Typical mix designs for modified/unmodified mortar & resulting values are shown below.

	Control Mortar	<b>SMART SBR LATEX</b> Mortar
<b>Cement</b>	50 kg	50 kg
<b>Sand</b>	150 kg	150 kg
<b>SMART SBR LATEX</b>		25 lit
<b>Water</b>	25 lit	

Property	Typical Results	
	Control Mortar	Smart SBR Latex Mortar
Compressive Strength (ASTM C 109:92)		
@ 1 day	14 N/mm <sup>2</sup>	18 N/mm <sup>2</sup>
@ 2 day	20 N/mm <sup>2</sup>	30 N/mm <sup>2</sup>
@ 7 day	25 N/mm <sup>2</sup>	39 N/mm <sup>2</sup>
@ 28 day	33 N/mm <sup>2</sup>	48 N/mm <sup>2</sup>
Tensile Strength (ASTM C 190:88) @ 28 day	3.5 N/mm <sup>2</sup>	4.5 N/mm <sup>2</sup>
Slant Shear Bond (ASTM C 882:91) @ 28 day	3 N/mm <sup>2</sup>	10 N/mm <sup>2</sup>

- Conform to HDB specifications as a bonding agent.

### DIRECTION FOR USE

#### Typical Mix Designs

	<u>Cement Slurry</u>	<u>Mortar</u>	<u>Concrete Topping</u>
<b>Cement</b>	50 kg	50 kg	300 kg
<b>Sand</b>		150 kg	690 kg
<b>Aggregate</b>			635 kg
<b>Smart SBR Latex</b>	30-35 lit	25-28 lit	130-150 lit
<b>Coverage</b>	32-43 m <sup>2</sup>	09-12 m <sup>2</sup> (@ 12 mm)	16-17 m <sup>2</sup> (@ 50 mm)

### Bonding Aid Application

- Mixed cement slurry according to the above mix design.
- Hack & remove all loose/unsound concrete & expose the entire surface of any corroded reinforced steel.
- Apply the cement slurry by brush to the concrete surface.

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### Mortar/Concrete Topping Additive

#### Application

##### **Substrate Preparation**

- All concrete substrates must be cleaned to remove contaminants such as oil, grease, dust, laitance, etc.
- Pre-saturate all substrates with water prior to application. Do not allow ponding of water; use a sponge to soak up excess ponding water.

##### **Mixing**

- Mix the mortar or concrete topping according to the above mix designs.
- Do not use air entraining admixtures.
- Keep mortar & concrete as stiff as possible for the intend use. Over mixing may entrap air & should be avoided.

##### **Placing**

- Small and/or shallow repairs can be made by scrubbing latex modified mortar on to the damp substrate & then filling & leveling immediately.
- Overlays and/or deep repairs can be made by priming the damp surface with **SMART SBR LATEX** cement slurry before installing **SMART SBR LATEX** modified concrete or mortar.
- Use a float or light broom for the final finish. Avoid over trowelling the completed surface.
- Optimum working temperature range is 25C° to 32 C°.
- Since cool weather retards the mortar & hot weather causes premature drying & excessive cracking, the latex material must be placed quickly in to the area to be repaired.

##### **Curing**

- **SMART SBR LATEX** modified mortars or concrete toppings must be cured immediately after finishing.
- A suitable curing compound should be sprayed on the surface of the finished mortar in a continuous film.
- In harsh drying conditions, supplementary curing with polythene sheets must be used.

##### **Cleaning Up**

- All tools should be cleaned immediately after use before latex modified cement hardens.
- If this precaution is overlooked, solvents such as mineral spirits or xylene can be used to remove the latex/cement mixture.

##### **PACKAGING & STORAGE**

- **SMART SBR LATEX** is supplied in 205 liter drums.
- **SMART SBR LATEX** should be stored in a cool, dry place & protected from freezing. The shelf life is approximately 12 months.

##### **TECHNICAL SERVICE**

The company provides good servicing from a team of dedicated specialist in the field. When used in accordance with its current published directions, the product will perform as described in this catalogue. Millennium Concrete Technologies will not be responsible for difficulties caused by other materials, conditions or inferior workmanship and quality control. We reserve the right to determine the true cause of any difficulty by accepted test methods.

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