

Description:

TechnoCrete® SBR Latex is a Styrene Butadiene Copolymer Latex liquid, which is specially modified to be compatible with cement based mixes (ordinary Portland cement or high aluminium cement). It may be incorporated into cementitious renders, screeds or patching mixes in order to enhance the mechanical properties such as bonding (adhesion) with various building materials, flexural, compression and impact strength and abrasion resistance, reduces the 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.

TechnoCrete® SBR Latex improves the thin section fragility of cement when used as coating. It is resistant to hydrolysis hence can be used internally or externally and in areas of continuous or intermittent water contact. It also improves the chemical and water resistance of cementitious mixes and is recommended for use in effluent tanks, dairies, food factories, fertilizer stores etc.

Application:

- Concrete repair: Spalled concrete, repairing floors, beams and pre-cast slabs, chajjas etc.
- Bond Coat: For bonding new concrete to old concrete, thin sets, terrazzo, stucco and bonding coats 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, Toppings, repairs and leveling concrete surfaces 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: Bridge decks, highways and parking decks repair, Bedding tiles, fixing or re-fixing slip bricks.

Features & 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.
- **High Dispersion technology:** Allows for better workability at slightly reduced water applications too.

Surface Preparation:

Remove all loose concrete, grease, moulds oil or curing compound from concrete and steel surfaces using wire brush, scrubber. Prior to application of TechnoCrete® SBR Latex, ensure to clean the substrate which should be free from all the dust, foreign particles, loose aggregate and oil grease etc. This can be done with the help of scarifying, grinding, water jetting and sand blasting etc. The surface should be wetted, well prior to application, thoroughly with water to get SSD condition. All the depression or pin holes /pot holes to be repaired, 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.

For bonding slurry:

Mix 1½ parts cement to 1 part TechnoCrete® SBR Latex by weight of cement. Mix to a lump-free creamy, consistency for 2-3minutes by slowly adding TechnoCrete® SBR Latex. 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 good quality OPC Cement with TechnoCrete® SBR Latex in ratio of 1:1 (1 parts of OPC: 1 part TechnoCrete® SBR Latex by weight, (always add powder to liquid for all applications).The mix should be stirred thoroughly until smooth homogeneous paste is obtained.

Apply first coat over SSD condition substrate as a primer bond coat. Mix good quality OPC Cement with TechnoCrete® SBR Latex in ratio of 2:1 (2parts of cement: 1 part TechnoCrete® SBR Latex) by weight, (always add powder to liquid for all applications) and apply second coat over the primed surface using a nylon brush or paint roller. Apply and unroll TechnoFix® GFM-fibre mesh evenly on the wet coating before it dries out on larger areas.

Using a nylon brush, apply 3rd coat of TechnoCrete® SBR Latex coating in ratio of 2:1 (2 parts of cement : 1 part TechnoCrete® SBR Latex) by weight, over the fiber mesh so as to cover the fabric, allow 5-6 hours of air drying before application of 3rd coat of TechnoCrete® SBR Latex slurry coating over the surface if required. Provide polymer modified protective plaster of 15-20 mm thick over the coating to ensure safety from mechanical damage.

Curing:

Moist curing should be done for a period of 3 days by spraying / sprinkling of potable water after about 6 hours from the time of application of the final coat. After moist curing the coating shall be allowed to dry before submersion in water. Do not allow the rapid drying of the coating by covering the coating with help of polythene sheet in case of high humidity and windy condition.

Mix Design for Various repair application:

Mix Design	TechnoCrete® SBR Latex	Cement	Sieved Sand	Coarse aggregate (6mm down)	Water
For Repair Mortar	10 Kg	50 Kg	150 Kg	Nil	10 litres
For Floor Topping/Sc reed	10 Kg	50 Kg	75 kg	75 kg	10 litres

Mixing Process Mortar/Screened:

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 30 kg. Mix required quantity of TechnoCrete® SBR Latex 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 TechnoCrete® SBR Latex 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.

Properties of Polymer modified mortar					
Mortar proportioning	Cement	Quartz Sand (Zone II)	Techno Crete® SBR Latex	Water	Fresh wet density
	50 Kg	150 Kg	10 KG	10 litres	~ 2000-2200 kg/m ³
Mortar Compressive strength* (ASTM C 109), 70*70*70 cube				~ 40MPa at 28days	
Mortar Flexural strength* (ASTM C 348)				~ 10MPa	
Mortar Tensile strength* (BS 6319,pt.7)				~ 5MPa	
Adhesion for Bond Coat (ASTM D 4541)				>1.5MPa or concrete failure.	
Water permeability for waterproof coat (DIN 1048)				Nil at 5 Bar	
Properties					
Appearance before mixing with cement	Milky white liquid				
Appearance when mixed with cement	Grey				
pH value	>7				
Relative density	~ 1.02 +/- 0.01 at 25°C				
Application temperature	Above 10°C to 40°C				
Packaging	TechnoCrete® SBR Latex is supplied in 30 Kg, 50 Kg & 235 Kg barrel packing.				
Storage:	TechnoCrete® SBR Latex has a shelf life of 24 months if remained unopened, stored in cool dry place.				
*Properties are of typical mix and guiding in nature, and may vary depending upon mix constituents. We strongly advises to carry out site mix design and site trials.					

Screeds and toppings, applied to horizontal surfaces

Application thickness 10mm to 100mm. TechnoCrete® SBR Latex 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.

Precaution & Limitations:

TechnoCrete® SBR Latex should not be used in isolation of cement. TechnoCrete® SBR Latex shall be applied to the substrate temp above 10°C to below 40°C. Ensure to provide a protective plaster over the final coat to avoid mechanical damage.

Health and Safety instructions:

TechnoCrete® SBR Latex is non-toxic. Gloves and goggles should be worn. Any splashes to the skin or eyes should be washed off with clean water. In the event of prolonged irritation, medical advice should be sought. Should use a dust mask while handling the powder.

Additional Information: Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

*Separate datasheet are available on these products.

Disclaimer: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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