

FEBOND SBR
MULTI-PURPOSE ADMIXTURE FOR CEMENTITIOUS SYSTEMS.
WATERPROOFS AND GREATLY IMPROVES MORTARS. EXCELLENT
BONDING AGENT.

Description:

FEBOND SBR is a styrene-butadiene co-polymer latex specifically designed for use with cement compositions.

It is used in mortar and concrete as an admixture to increase water resistance, wear resistance and durability.

It is used with cement as a reliable water resistant bonding agent.

Primary Uses:

- Concrete repair.
- Floor screeds and toppings.
- External rendering.
- Waterproofing and tanking.
- Fixing brick slips and tiles.
- Corrosion protection of steel.

Typical Applications:

Concrete Repair:

Spalled concrete, repairing floors, beams and pre-cast slabs.

Floor Screeds and Toppings:

Abrasion resistant and non-dusting floors, underlay for special finishes, mild chemical and effluent-resistant floors.

External Rendering:

Waterproof, weatherproof and frost resistant render.

Waterproofing and Tanking:

Basements, lift pits, inspection pits, water towers, liquid tanks, effluent tanks, swimming pools.

Other Typical Applications:

Bedding tiles, fixing or re-fixing slip bricks, bonding new concrete to old.

Advantages:

FEBOND SBR modified cement-based mixes have the following advantages: -

- Earlier hardening.
- Greatly improved flexibility.
- Tensile strength normally doubled.
- Greatly reduced shrinkage.
- Prevents bleeding.
- Lower water-cement ratio.
- Increased durability and toughness.
- High resistance to water penetration.
- Good abrasion resistance.
- Good frost resistance and resistance to salt permeation.

- Good resistance to many chemicals and to mineral oil.
- Excellent adhesion to steel and concrete (increased by up to 25 times). Sticks well to brick, glass, asphalt, wood, expanded polystyrene and most building materials.
- Prolonged corrosion protection.
- Proven performance.
- Similar thermal expansion and modulus properties to concrete (unlike resin mortars and primers).
- Non-toxic. Can be used with potable water.
- More economical than epoxy or polyester resin mortar.

Action:

The use of FEBOND SBR synthetic latex in cement-based slurries and mortars compensates for many deficiencies in the mixes without detracting from their inherent strength and properties.

FEBOND SBR has been developed specifically for use with Portland cement. As ordinary mortar dries out, voids are left which make it permeable and weaker. When SBR is added, the SBR particles bind together to form continuous films and strands – these stitch the opposite sides of the voids together and block up the spaces, thus increasing strength and resistance to water penetration.

FEBOND SBR combined with cement produces an excellent adhesive; each component complements the properties of the other in this respect.

Composition:

FEBOND SBR is a milky, white liquid, produced from styrene and butadiene by high pressured emulsion polymerisation. The latex contains microscopic particles of synthetic rubber, dispersed in a aqueous solution. FEBOND SBR modified mixes may be slightly darker than corresponding un-modified mixes.

Properties:

Typical properties of FEBOND SBR modified cement and sand mix are given below. Unless otherwise stated, these are based on a “3 parts sand to 1 part cement” mix in which 10 litres of FEBOND SBR per 50kg of O.P Cement has been incorporated.

Compressive Strength	Up to 69N/mm ² dependent on cement used and workability.
Tensile Strength	Up to 6.5N/mm ² dependent on cement used and workability.
Flexural Strength	Up to 13N/mm ² dependent on cement used and workability.
Freeze Thaw Resistance	Excellent
Water Vapour Permeability	Less than 4gm/m ² /24hr, through an 11mm thick test piece
Adhesion	Excellent to concrete, steel, brick, glass, etc.
Coefficient of Thermal Expansion	
• -20°C+20°C:	12.8 x 10 ⁻⁶
• +20°C+60°C:	12.9 x 10 ⁻⁶
Chemical Resistance	Resists mild acids, alkalies, sulphates, chlorides, urine, dung, latic acid, sugar, etc.

Shrinkage During Cure	0.01% to 0.02%
Resistance to Water under Pressure – 30m Head:	Excellent – no water penetration through a 15mm thick test piece

Directions for Use:

Surface preparation:

Surfaces to which FEBOND SBR mixes are to be applied should be clean, sound and free of deleterious substances.

Remove all laitance, oil, grease, mould, oil or curing compound from concrete surfaces using a wire brush, brush hammer, scabblor or other plant as appropriate. Ensure that reinforcing steel is clean and free from grease or oil; remove scale and rust. When repairing spalled or damaged concrete, ensure that the concrete has been cut back to thoroughly sound material.

Available in 1, 5, 20, and 200 litre packs.