

VARABOND SBR

HIGHLY CONCENTRATED POLYMER EMULSION

DESCRIPTION

VARABOND SBR is a highly concentrated styrene butadiene polymer emulsion modified with a blend of special auxiliary chemicals. **VARABOND SBR** can be used for indoor as well as outdoor applications as the system is resistant to hydrolysis.

USES

- ◆ It is used as an integral adhesive and admixture to produce at the job site polymer modified cementitious mixes.
- ◆ It is used in preparing thick tile bedding mortar.
- ◆ It is recommended for use in bonding polystyrene panels with cementitious mortars.
- ◆ It is used for general repair of damaged and spalled concrete. It also improves the qualities of the flooring screeds and increases the waterproofing and chemical resistance of cementitious mixes used as renders.
- ◆ It is used as primer/sealer for cementitious repair products and cementitious floorings.

ADVANTAGES

- ◆ A highly concentrated 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 or floorings.
- ◆ Mixed with sand/cement, it will produce highly adhesive mortar for bonding extruded polystyrene or insulation panels to concrete.
- ◆ Economical to use since it can be diluted with clean water.

TYPICAL PROPERTIES

- ◆ **Mechanical characteristics:** Typical improvements in mechanical properties of a 3 : 1 sand/cement mortar using **VARABOND SBR** at 15% on cement level.

		Control	VARABOND SBR
Compressive strength (N/mm ²)	Dry	28.5	36.0
	Wet	23.0	24.0
Tensile Strength(N/mm ²)	Dry	3.5	5.0
	Wet	2.5	4.0
Flexural Strength(N/mm ²)	Dry	7.0	10.0
	Wet	6.0	9.5
Drying Shrinkage(%)		0.07	0.02
Adhesion to Concrete – Slant Shear bond (N/mm ²)		2.6	20.0

- ◆ **Chemical resistance:** Cement based materials have limited chemical resistance. The addition of **VARABOND SBR** to cement mortars reduces permeability and therefore helps reduce the rate of attack by aggressive chemicals.
- ◆ **Water Vapour Permeability:** Less than 4gm/m/24hrs, through a 10mm thick test piece.
- ◆ **Coefficient of Thermal Expansion :**
 - 20° C to +20° C : 12.8 x 10⁻⁶
 - +20° C to +60° C : 12.9 x 10⁻⁶
- ◆ **Resistance to Water under Pressure - 30m Head :**
 - Excellent - no water penetration through a 15 mm thick test piece.

SURFACE PREPARATION

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 **VARABOND SBR** for cementitious mixes.

APPLICATION

Immediately before priming, the concrete substrate should be thoroughly dampened with water with any excess being brushed off. All surfaces must be primed by stippling in the slurry coat of 1 volume.

VARABOND SBR to 3 volumes fresh cement. In order to obtain a smooth consistency, the cement should be blended slowly into the liquid. Stir frequently during use to offset settlement. 17 kg of **SBR** mixed with 50kg cement will cover 32-38 sq.m./coat dependant on substrate texture and thickness applied. Avoid "**puddling**" off the slurry coat. The topping must be applied into the wet slurry. If the slurry dries out it must be removed and the clean substrate reprimed.

A typical mix design for:

- (i) Patching and repair mortar or a render is:
- | | |
|----------------------|------------------|
| Cement | 50 kgs |
| Grade C/M sharp sand | 150 kgs |
| VARABOND SBR | 10 kgs |
| Water | 8 litres approx. |

The minimum recommended thickness is 6 mm.

- (ii) For heavy-duty floor screeds, replace half the sand with local aggregate 3/16" (5mm). Use at a semi-dry cohesive consistency at a thickness of 10-25 mm.

- (iii) For bonding of slip bricks, tiles etc.
- | | |
|----------------------|--------------------|
| Cement | - 50 kg. |
| Grade C/M sharp sand | - 125 kg. |
| VARABOND SBR | - 15 kg. |
| Water | - 3 litres approx. |

Water is used to adjust to a fine mortar consistency.

Recommended thickness 6-40 mm.

GENERAL INSTRUCTIONS

Always prepare surface thoroughly. Toe-in all edges wherever possible to avoid feather edging. All surface including edges must be primed. All

application should be wet on wet, the primer must not be allowed to dry. The water content should be kept to the minimum necessary. In order to prevent rapid drying, mortars should be properly cured as per standard curing procedure of concrete. Minimum application temperature is 5° C. Do not retemper mortar or prime after initial set.

PACKAGING

VARABOND SBR is available in 5, 20 and 200 Litre packing.

PRECAUTIONS

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

Storage: Shelf life 12 months when stored in dry conditions at moderate temperature and humidity. Protect the Product from frost.

Fire resistance: **VARABOND SBR** is not flammable.

PERFORMANCE SPECIFICATION

VARABOND SBR meet the performance requirements of **ASTM C – 1059-99** - Standard specification for Latex agents for bonding fresh to hardened concrete, Type II.

HEALTH AND SAFETY

VARABOND SBR is non-toxic 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.