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TECHNICAL DATA SHEET TDS207  
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# SEALOTAK SBR

## DESCRIPTION

SEALOTAK SBR is a liquid, water based styrene-butadiene polymer latex with high bonding characteristics. It is used as an admixture in cementitious mixes to improve the quality of finished toppings, renderings or protective slurry coatings:

- It ensures thorough bonding of floor toppings, renderings, and repair mixes to worn, damaged, spalled and cracked concrete beams, columns, panels and masonry
- It allows thin jointless floor toppings or renderings to be applied and increases their resistance to impact, abrasion and chemical spillage.
- It reduces permeability of the finished rendering when externally water-proofing walls above ground.
- It reduces permeability of finished floor toppings or rendering when internally water-proofing water tanks, basements, pools, ponds and showers
- It strengthens bedding mixes and improves bonding when laying tiles and brick pavements to concrete or asphalt surfaces.
- It will produce economic, waterproof and protective slurry coatings for concrete and brickwork.
- It improves the workability of the mix, allowing a reduction in the water/cement ratio.

## ADVANTAGES

- \* **ADHESION**  
Improves adhesion and bonding
- \* **PLASTICISING**  
Allows water reduction without loss of workability
- \* **DURABLE**  
Reduces shrinkage and cracking giving good freeze/thaw resistance.
- \* **STABLE**  
Alkali stable in cementitious mixes
- \* **WATER BYELAWS SCHEME** –approved product

## TECHNICAL DATA

Appearance	White Liquid
Specific Gravity	1.02
Particle Size	0.2 microns
Coverage: Slurry Coat	17m <sup>2</sup> per 5 litres
Admixture	9 – 10m <sup>2</sup> @ 6mm per 5 litres 3 – 4m <sup>2</sup> @ 20mm per 5 litres
Working Time @ 20°C	20 – 40 minutes
Set Times	Dependant on mix and cement type

## TYPICAL TEST RESULTS

### Chemical Resistance

Flexural strength of sand / cement toppings. Total immersion in chemicals listed for 3 months after 28 days curing.

	Unmodified	With Sealotak at standard dosage rate
10% Potassium Hydroxide	9.1 N/mm <sup>2</sup>	9.6 N/mm <sup>2</sup>
5% Lactic Acid	6.2 N/mm <sup>2</sup>	9.8 N/mm <sup>2</sup>
5% Hydrochloric Acid	2.4 N/mm <sup>2</sup>	5.0 N/mm <sup>2</sup>
Petroleum Spirit	7.5 N/mm <sup>2</sup>	8.5 N/mm <sup>2</sup>
Non immersed control	7.4 N/mm <sup>2</sup>	13.4 N/mm <sup>2</sup>

Tests were carried out under laboratory conditions and are for guidance only.

Compressive Strength to BS6319 Pt2 (N/mm<sup>2</sup>)

	2 Days	3 Days	1 wk	4 wks
SEALOTAK dry cured At 20-25°C ; 65% RH	32	38	49	63

SEALOTAK mix at 20% on OPC; 3 : 1 Sand / OPC. All mixes to same workability.

Dry Conditions	Unmodified 3:1 Sand/Cement	With Sealotak at standard dosage rate
Tensile Strength	3.1 N/mm <sup>2</sup>	4.4 N/mm <sup>2</sup>
Flexural Strength	7.2 N/mm <sup>2</sup>	10.8 N/mm <sup>2</sup>
Bond to concrete	0.1 N/mm <sup>2</sup>	3.5 N/mm <sup>2</sup>
Bond to steel	Nil	1.6 N/mm <sup>2</sup>
Wet Conditions		
Tensile Strength	1.8 N/mm <sup>2</sup>	4.0 N/mm <sup>2</sup>
Flexural Strength	5.9 N/mm <sup>2</sup>	9.7 N/mm <sup>2</sup>
Bond to concrete	0.3 N/mm <sup>2</sup>	1.1 N/mm <sup>2</sup>
Bond to steel	Nil	1.3 N/mm <sup>2</sup>

#### Abrasion Resistance:

Rotating wire brush loaded at 6.4 kg.  
Comparative weight Loss:

3 : 1 Sand : Cement Unmodified	1.250
2.5 : 1 Grano Topping	0.015
3 : 1 Sand : Cement + SEALOTAK	0.020

#### Water Penetration

3 : 1 Sand / Cement render incorporating SEALOTAK at standard dosage rate; 30m head of water.

Penetration after 3 days : Nil

#### METHOD OF USE

##### Surface Preparation

Correct preparation is essential for the successful application of SEALOTAK SBR.

##### Concrete:

All substrates should be sound and free from all traces of laitance, oil and grease. Surfaces should be scarified to present a good mechanical key. Suitable methods of scarifying include scabbling, planing and shot blasting. Substrates saturated by oil and grease from previous usage present a particular problem and should be given special treatment such as HCA followed by degreasing.

##### Steel:

Remove all loose scale and rust, preferably by grit blasting, grinding or with a needle gun back to a bright metal finish, and clean down. Remove grease etc, with a suitable solvent. After preparation and before application of SEALOTAK SBR a priming coat of EPOXY GP PRIMER should be brushed well into the surface.

When patch repairing, working to a clean defined edge is important. Saw cut or chisel out to a minimum depth of 6mm. Edges produced by a diamond saw need to be roughened prior to the application of a SEALOTAK BONDING SLURRY.

#### Bonding Slurry

A SEALOTAK bonding slurry should be used to improve the adhesion of most cementitious screeds, toppings, renders and coatings, including water gauged mixes and those modified with SEALOTAK.

The slurry should be made from a 2 : 1 mix by volume of cement and SEALOTAK. If necessary the consistency can be adjusted by adding additional SEALOTAK – do not dilute with water. Scrub the slurry well into the prepared and dampened down substrate with a stiff brush, to an even coating of maximum thickness 1mm.

Apply the repair mix, topping, render or screed whilst the slurry is still wet.

#### Patching Spalled and Damaged Concrete.

Prepare substrate and any exposed steel and apply a bonding slurry as described above.

A good general purpose patching mix may be produced from 3 parts of clean washed sharp sand to one part of OPC by weight, incorporating SEALOTAK at the rate of 10 litre per 50kg of cement – water as required.

It is often possible to apply the repair mortar in one coat up to 50mm in depth. However for vertical or soffit repairs the mix should be applied in two 25mm layers, allowing the first to dry for about 3 hours before applying the second. The first coat should always be 'scratched' to form a key but a slurry coat will not be required between layers providing the time lapse between applications is not exceeded. The thickness of a patch repair over exposed steel reinforcement should NOT be less than 12mm.

#### Floor Toppings and Screeds.

(a) 12mm to 25mm thickness

Prepare and apply a SEALOTAK slurry as above. A typical mix would be:

SEALOTAK	- 10 litres
Sharp washed sand	- 150 kg
OPC	- 50 kg

The correct consistency is a crumbly mix that will remain cohesive when squeezed together. A good quality sand that does not contain appreciable

amounts of fine particles is essential to avoid problems with drying shrinkage and curling.

The topping or screed should be applied at a minimum thickness of 12mm in one coat. Maximum thickness should not exceed 25mm, except to compensate for undulating surfaces where thicknesses of up to 50mm can be applied where necessary. The mix should be kept just wet enough to obtain good compaction.

(b) 25mm to 75mm thickness

Prepare, damp down and apply a SEALOTAK slurry as above. A typical well graded concrete mix containing 10 – 20 mm maximum size aggregate depending on total thickness and SEALOTAK at the rate of 9 litre per 50 kg of cement would be suitable. For thicknesses above 40mm the SEALOTAK content can be reduced by 25%.

The work should be finished quickly with a steel trowel as application proceeds. Whilst SEALOTAK considerably improves the properties of floor toppings, it is important that good floor laying techniques are followed at all times in order to achieve a high quality floor.

### **Granolithic Floor Toppings**

Prepare, damp down and apply a SEALOTAK slurry as above. A typical mix would be:

SEALOTAK	-	10 litres
Sharp washed sand	-	50 kg
6 – 10mm dust free granite aggregate	-	100 kg
OPC	-	50 kg
Water	-	as required.

Thicknesses and general instructions for granolithic floor toppings are as under 'Floor Toppings', except that the minimum thickness should be 20mm.

### **External Waterproofing of Walls Above Ground.**

Prepare the substrate by ensuring that all dirt and laitance is removed by wire brushing. Surfaces must be clean, sound and free from grease.

Damp down and apply one coat of SEALOTAK slurry scrubbed into the surface. Allow this to dry and apply a second coat at right angles to the first. Whilst this second coat is still wet apply the following render mix:

SEALOTAK	-	10 litres
Sharp washed sand	-	150 kg
OPC	-	50 kg
Water	-	as required

Keep the mix fairly dry and finish the work quickly with a wood float as application proceeds.

Renderings should be applied in two 6mm coats allowing a maximum 8 hours between coats depending on weather conditions. Provided this time is not exceeded then SEALOTAK slurry coats are not required between layers.

### **Internal Waterproofing of Water Tanks, Basements, Pools, Ponds and Showers**

Prepare by thoroughly hacking, cleaning and preparing floors and walls. Wash and brush down to remove dust, loose particles and other foreign matter. Make good cracks in floors and walls by cutting out in a dovetail fashion and then caulking with a mix of:

1 Part	-	OPC
1 Part	-	Clean washed sand (3mm down)

gauged with 1 volume of DOUBLE STRENGTH PREMIX and 4 volumes of water.

If running water is present all leaks must be plugged using fresh OPC and neat DOUBLE STRENGTH PREMIX or SEALOPLUG.

### **(i) Wall Renders**

Damp down and thoroughly scrub in a SEALOTAK slurry. The slurry should overlap the floor by 300mm. When touch dry, normally in 10 – 20 minutes, apply a second coat brushed at right angles to the first. Total thickness of both slurry coats together should not exceed 2mm. Allow to dry thoroughly for at least 24 hours in a dry atmosphere.

Apply a third SEALOTAK slurry coat and whilst still wet, apply the following render mix:

SEALOTAK	-	10 litres
Sharp washed sand	-	150 kg
OPC	-	50 kg
Water	-	as required

Apply the render 6mm thick, overlapping the floor to wall joint and carry the rendering 150mm OVER the floor.

Allow to dry for 24 hours and then apply another SEALOTAK slurry coat followed whilst still wet by a second 6mm render coat of the same composition as the first, to finish 100mm ABOVE the new floor level. Completed renderings to be a thickness of approximately 15mm and to have a wood float finish

For an area of 25m<sup>2</sup>, 28 litres of SEALOTAK will be required for the 4 slurry coats and 23 litres of SEALOTAK for the 2 render coats.

## (ii) Floor Topping

Prepare damp down and apply two coats of SEALOTAK slurry coat as described under 'Wall Renders' and allow to dry thoroughly for 24 hours. Apply a third coat and whilst still wet apply the following floor topping mix at a thickness of 15mm:

SEALOTAK	-	10 litres
Sharp washed sand	-	150 kg
OPC	-	50 kg
Water	-	as required

This should be applied as under 'Floor Toppings' The correct consistency is a crumbly mix that will remain cohesive when squeezed together.

Carry the floor topping 100mm up the wall and overlap and stagger the joint. All angles (vertical and horizontal) including the wall to floor joint to be finished with a cove.

For an area of 25m<sup>2</sup>, approximately 21 litres of SEALOTAK will be required for the 3 slurry coats and 23 litres for the floor topping. Allow at least 14 days before filling water retaining structures, otherwise there is a risk of the renders debonding.

### **Bedding and Bonding Quarry Tiles, Brick Paviours, etc to Concrete or Asphalt.**

Prepare thoroughly and apply a SEALOTAK slurry coat. Whilst this is still wet apply a bedding mix made up as follows:

SEALOTAK	-	10 litres
Sharp washed sand	-	150 kg
OPC	-	50 kg
Water	-	as required

Apply the bedding mix 12mm thick at a rate of 12m<sup>2</sup> per 5 litre of SEALOTAK and whilst still wet bed the tiles or paviours as per normal practice.

### **Waterproof Cement Coatings**

These are not recommended for water retaining structures. Prepare the surface to remove all dirt, grease and laitance. Make good badly worn areas

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and those showing exposed aggregate with a suitable repair mix – See above. Allow the repair to fully cure. Then damp down with water and apply a coating made up from the a 1 : 1 volume mix of OPC and SEALOCRETE FINE AGGREGATE, gauged with approximately 1 part of SEALOTAK to produce a brushable coating of the required consistency. Do not add water to the mix.

Apply the first coat by scrubbing well into the surface and allow to dry. When dry apply a second coat at right angles to the first. Allow to dry thoroughly before putting into use. If the coating system is to be applied to cracked areas, bed into the second coat a fibreglass scrim and when dry apply a third coat.

**Do not use SEALOTAK at temperatures below 4°C and do not exceed the recommended thickness of screeds or toppings.**

### **MIXING**

All mixing must be carried out using a forced action pan mixer. Mix for 3 to 5 minutes until a completely homogeneous mortar is obtained. DO NOT OVERMIX. Suitable mixers are manufactured by Refina, Cretangle or Pennine.

### **CLEANING OF TOOLS**

Immediately after use all tools and mixing equipment should be cleaned with water.

### **STORAGE**

SEALOTAK SBR must be stored in cool, dry conditions away from moisture, direct sunlight or frost. This product will have a twelve month shelf life when stored in these conditions in original unopened containers.

### **HEALTH & SAFETY**

SEALOTAK SBR is non hazardous in normal use. Prolonged or repeated contact should be avoided as the product contains a small quantity of bacteriacide. Please refer to the relevant Health and Safety Data Sheet. For detailed information regarding the handling of this product.

