

# RonaScreed SBR

## Admixture for thin bonded toppings



### FEATURES

- will accept foot traffic after 24 hours
- rapid drying—can receive floor coverings such as vinyl, tiles and carpet after 10 days @ 50mm thick
- excellent wear resistance
- bonded screeds from 10mm
- improved compressive, flexural and tensile strength
- excellent resistance to passage of water and water vapour
- suitable for screed pumps

### Description

RonaScreed SBR is an admixture for site batched screeding mortars and fine concretes with approximately 40% solids content. The mix design for each is RonaScreed SBR admixture, cement, medium grade sharp sand, aggregate as determined by the mix design, plus water. The components are measured by weight or by volume on site and mixed using forced action mixer to form the screed.

Bonded screeds are primed with a mixture of RonaScreed SBR and cement, which achieves monolithic adhesion to correctly prepared concrete or screeds.

RonaScreed SBR screeds are used to lay new screeds and toppings as thin as 10mm bonded. The cured mortar bonds securely to suitably prepared surfaces and is water resistant.

### Mix Designs

	Mix 1	Mix 2
Use	Wearing or levelling screed or screed repair	Granolithic Topping or repair
Min / max thickness	10mm / 70mm	15mm+
Portland cement (CEM II 42.5)	50kg	50kg
0/4mm screeding sand	150kg	100kg
5/10mm granite	-	100kg
RonaScreed SBR	10 litres	10 litres
Water	Typically up to 8 litres	Typically up to 8 litres
Yield per mix	0.1m <sup>3</sup>	0.12m <sup>3</sup>

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### Physical Properties

	Mix 1	Mix 2
Compressive strength @ 7 days	> 32N/mm <sup>2</sup>	> 37N/mm <sup>2</sup>
Compressive strength @ 28 days	> 45N/mm <sup>2</sup>	> 47N/mm <sup>2</sup>
Tensile strength @ 7 days	> 2.5N/mm <sup>2</sup>	> 3N/mm <sup>2</sup>
Tensile strength @ 28 days	> 3.5N/mm <sup>2</sup>	> 3.7N/mm <sup>2</sup>
Flexural strength @ 7 days	> 6N/mm <sup>2</sup>	> 6N/mm <sup>2</sup>
Flexural strength @ 28 days	> 9N/mm <sup>2</sup>	> 9N/mm <sup>2</sup>

Note that all quoted data is based on tests conducted at 20°C by casting 100mm cubes which are air cured. Results shown are typical strengths achieved by casting and curing cubes in laboratory conditions; site strengths will be lower. Water addition is variable according to the water content of the aggregate.

### Instructions for Use

#### Preparation

The substrate on which the screed is being placed must be structurally sound and stable and suitable to receive a high strength screed or topping. Surfaces should ideally be vacuum shot blasted or similar to expose the aggregate and provide a mechanical key. All grease and oil must be removed. Dust, debris and loose material must be removed by vacuuming. Weakness in the substrate may result in debonding and failure of the screed or topping applied to it. The recommendations regarding assessment of the substrate given in BS8204-3: 2004 should be followed. Note the minimum and maximum application depths for each mix design. Where necessary the existing substrate must be square cut to the required depth, to allow the minimum depth of mortar to be placed.

#### Damping

The prepared surfaces must be thoroughly damped with clean water. Very porous surfaces may require soaking for up to 24 hours. All free water must be removed before the primer is applied.

#### Priming

Brush apply a coat of RonaScreed SBR/ cement primer mixed 1:1 by volume to the damp surface immediately before applying the screed, at the rate of 3-4m<sup>2</sup> approximately per litre of RonaScreed SBR. Mix the primer thoroughly and apply evenly over the surfaces ensuring total and uniform coverage, taking care to avoid ponding. Only prime an area of floor which can be covered by the mortar within the working time of the primer.

**Note that the primer must not be allowed to dry. If it dries it must be thoroughly scratched and reapplied.**

#### Mixing

RonaScreed SBR screeds should be mixed by forced action mixer, to ensure adequate dispersal of mix components. The use of a forced action mixer (e.g.. CreteAngle or Baron M200/ 300) will provide optimum performance; free fall mixers **must not** be used, dispersal of components is poor. When using an efficient mixer, a mixing time of 3/4 minutes is normally sufficient. It is essential to the performance of the screed that there is sufficient gauging liquid in the mix and that the correct amount of RonaScreed SBR is used. The consistency of the screed must **not** be semi-dry, adequate hydration of the cement is essential to achievement of strength. To test for correct consistency, make a ball of the mixed material. If the ball can be pulled apart without crumbling, the mortar will contain

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### Instructions for Use (continued)

sufficient gauging liquid to fully hydrate the cement and allow proper compaction. Once mixed the mortar should be used as quickly as possible.

#### Placing

Screeds and toppings with an overall thickness greater than the maximum depth per layer, 50mm approximately, must be placed monolithically (wet on wet) in more than one layer to ensure compaction. Each layer should be of approximately equal thickness and using the same mix design. To ensure satisfactory adhesion the lower layer(s) should be combed or raked to provide a key for the next layer. Should intermediate layers be allowed to dry, a priming coat must be applied before application of the next layer.

Stress relief joints should be formed in bonded screed/ topping over day joints in the concrete and expansion, contraction and movement joints must be expressed in the screed and on suspended slabs, over beams to accommodate deflection. Floating and unbonded screeds should be separated from other building elements with isolation joints at screed perimeters, in doorways and around columns, manholes and fixed bases. Joints should also be formed between any hot and cold areas of the floor. For further information refer to BS8204-1.

#### Curing

As soon as possible after finishing the surface, cure with tight fitting polythene or Ronacrete Curing Membrane. Leave polythene in place for at least 24 hours to prevent rapid moisture loss and surface cracking and crazing. Take care not to damage the surface. The use of Ronacrete Curing Membrane is preferred for screeds which will not receive bonded floorings or sealers, curing may commence immediately after trowelling is complete.

### Initial traffic

#### Traffic

RonaScreed SBR screeds, toppings and repairs can receive foot traffic after 24-48 hours (typically at 20°C) and after 3-5 days (typically at 20°C) heavy traffic may be allowed. This time will vary according to temperature, amount of liquid added during mixing, air circulation and other site conditions.

### Overlaying with floorings

The time at which floor coverings can be laid over a RonaScreed SBR screed is dependent on residual moisture content. Testing for relative humidity (RH) at the surface is an accepted non-destructive means of determining residual moisture content. Typically, a RonaScreed SBR screed will achieve 75% RH after 10 days air curing at 50mm thickness (at 20°C & 65% air humidity). Measure RH with a correctly calibrated hygrometer attached to a humidity box, see BS8203.

### Working Temperatures

RonaScreed SBR screeds can be used in most weather conditions and in a wide temperature range, typically from +3°C to 25°C and above. Note that at high ambient temperatures the working time of the mix will be reduced and increased at lower temperatures. Materials should ideally be stored in dry frost free conditions between 10°C and 20°C before use.

### Shelf Life and Storage

RonaScreed SBR should be stored unopened between 5°C and 25°C in dry warehouse conditions and out of direct sunlight. In these conditions shelf life is approximately 6 months.

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### Health and Safety

Refer to safety data sheet.

### Site Attendance

When on site Ronacrete representatives are able, if asked, to give a general indication of the correct method of installing a Ronacrete product. It is important to bear in mind that Ronacrete Ltd is a manufacturer and not an application contractor and it is therefore the responsibility of the contractor and his employer to ensure he is aware of and implements the correct practices and procedures to ensure the correct installation of the product and that liability for its correct installation lies with the contractor and not with Ronacrete Ltd.

The information detailed in this leaflet is liable to modification from time to time in the light of experience and of normal product application, and before using, customers are advised to check with Ronacrete Ltd, quoting the reference number, that they possess the latest issue. Any person or company using the product without first making further enquiries as to the suitability of the product for the intended use does so at his own risk, and Ronacrete Ltd can accept no responsibility for the performance of the product, or for any loss or damage arising out of such use.