RonaScreed Self Smooth Screed

Flow applied wearing and levelling screed for internal & external use

Description
RonaScreed Self Smooth Screed is a single component flow applied wearing and levelling screed suitable for internal and external use. The material is water tolerant and has excellent abrasion resistance.

RonaScreed Self Smooth Screed gains strength quickly and can be accessed by foot traffic after 4-5 hours and by light to medium duty traffic after 24 hours, at 20ºC.

Application thickness from 5mm to 40mm in a single application.

Features
- **easy to mix and apply**
- **single component, just add water**
- **can be poured or pumped**
- **used to repair rough or damaged concrete**
- **abrasion resistance - AR1**
- **excellent slip resistance**
- **suitable in heavy duty industrial premises**
- **ready for foot traffic after 4-5 hours**
- **rapid drying**
- **Apply from 5mm to 40mm in a single application**
- **excellent resistance to passage of water**
- **internal and external application**

Composition
RonaScreed Self Smooth Screed is supplied as a cement based dry powder which requires a specified quantity of clean water to produce a free flowing self-smoothing mix ready to pump or pour onto prepared, sealed and primed surfaces. It is manufactured by blending special cements, selected fillers, polymers and plasticisers. It is free from casien, other proteins and ammonia and is consequently suitable for use in hospitals and food processing areas. It has been carefully formulated to provide high performance and ease of application.

Achievable Surface Finish
RonaScreed Self Smooth Screed is designed to provide a rapid strength gain, hard wearing screed or a surface suitable to receive a further layer such as vinyl or coating. Due to the nature of the product the risk of entrapped air, pinholes and surface undulations cannot be eliminated. However efficient substrate preparation, sealing and priming, combined with correct mixing and application will provide optimum results. It is recommended that a specialist applicator is employed. The presence of surface imperfections will not impair the performance of the product.

Bonded Floor Coverings / Coatings
When RonaScreed Self Smooth Screed is to receive a bonded floor covering or coating, the surface must be abraded and vacuumed to remove laitance, to improve adhesion.

Physical Properties
Note that the following data is based on laboratory tests conducted at 20°C. Results shown are typical laboratory strengths achieved by casting and curing cubes in ideal working conditions; site strengths will be lower.

Strength data			
	Compressive	Tensile	Flexural
1 day	15N/mm²	-	-
7 days	24N/mm²	2.3N/mm²	6.0N/mm²
28 days	30N/mm²	4.0N/mm²	9.0N/mm²

Bond strength	
Bond strength	> 1.3N/mm²

Abrasion resistance (BS EN 13892-4)	
Performance class	AR1

Slip resistance (BS 8204-3 Annex A1)	
Dry	PTV 55
Wet	PTV 45

Shrinkage	
28 days	≤ 0.02% linear

Traffic times at 20ºC	
Foot traffic	4 - 5 hours
Light rubber wheeled traffic	24 hours

Packaging
Supplied in 25kg bags

Coverage
Approximately 1.7kg/m²/mm

Coverage per pack	2.94m² @ 5mm 1.47m² @ 10mm 0.74m² @ 20mm 0.37m² @ 40mm

Application thickness
Minimum thickness	5mm
Maximum thickness	40mm

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Application conditions
The substrate and ambient temperature must not be less than 5°C on a rising thermometer at the time of application (maximum temperature 30ºC). Materials should be at a temperature of 15°C - 20°C at time of application; lower temperatures will impair flow and surface finish. The area where the screed is being applied should be kept free from draughts while the screed is being laid and during the subsequent 24 hour period. The relative humidity in the area should not fall below 50%, to prevent over-rapid early drying. Apply the material within 15 minutes of mixing (at 20°C).

Protect the fresh screed from direct sunlight during the hydration/drying process. Low temperatures will reduce the flow of the wet screed and increase the risk of surface undulations and imperfections. Take extra care when working at low temperatures.

Substrate requirements
The concrete substrate to which RonaScreed Self Smooth Screed is to be bonded must be structurally sound and stable. Minimum compressive strength should be 25N/mm^2 and minimum pull-off strength should be 0.8N/mm^2.

Preparation
For bonded application, surfaces should be vacuum shot blasted, planed or scabbled to expose aggregate, remove laitance and provide a mechanical key. All grease and oil must be removed. Dust, debris and loose material must be removed by vacuuming. Any defect or weakness in the substrate may result in failure of the screed applied to it. The recommendations given in BS8204-7 section 7 should be followed.

Substrate sealing
Seal the prepared surface by applying one or more coats of RonaScreed Self Smooth Primer diluted with 5 parts water at the rate of 0.62 litres/m². Allow to dry for not more than 36 hours; protect the surface and keep clean.

Note that inadequate sealing will increase the risk of pinholing. Very porous substrates may require the application of two or more coats of sealer. Whilst it is difficult to determine whether a substrate has been sufficiently sealed, a sheen on the surface of the substrate is an indication of adequate sealing.

Substrate priming
Prime the sealed surface by applying one coat of RonaScreed Self Smooth Primer diluted with 3 parts water at the rate of 0.71 litres/m². Brush this well into the surface. Apply RonaScreed Self Smooth Screed whilst primer is tacky; typically between 2-4 hours after application based on material, ambient and substrate condition of 20°C @ 65%RH.

Sealing & Priming Estimating Guide
Divide surface area by 3.5 to calculate quantity of litres of RonaScreed Self Smooth Primer needed for sealing and priming e.g. 1000m² divided by 3.5 = 286 litres of Primer needed which is enough for one coat of sealer and one coat of primer)

Priming for heavy use areas
Areas subjected to heavy use should be primed with RonaFloor Epoxy Primer MT (following preparation), at the rate of 0.25kg/m² and fully blinded with 0.8-1.7mm kiln-dried sand at the rate of 3kg/m² whilst still wet. Allow to cure and vacuum excess sand before applying RonaScreed Self Smooth Screed.

Mixing & application
RonaScreed Self Smooth Screed may be applied either by mixer/pump Putzmeister SP 11 THF (or similar), when mixing smaller quantities, mix with a slow speed drill ≤ 450RPM fitted with an MR3 type helical paddle and pour onto the floor. Pump or pour RonaScreed Self Smooth Screed onto the prepared and sealed/primed surface and level with a pin rake. Spike rolling is necessary to expel entrapped air and must be completed before the mix begins to gel, to avoid leaving spike marks in the surface. **Apply the material within 15 minutes of mixing (at 20°C).**

For pump applications it is recommended that a contractor with the necessary experience to carry out this type of work is employed.

Water addition	
Water addition per 25kg unit	3.5 - 3.7 litres

Initial flow properties at 20ºC	
Using 65mm dia. x 40mm flow ring	190mm ±15mm

Note
- Major imperfections or deviations in the substrate may need to be made good before laying RonaScreed Self Smooth Screed.
- Allow the sealer to dry (RonaScreed Self Smooth Primer)
- Always prime surface with RonaScreed Self Smooth Primer within 36 hours of sealing operation.
- Remove ponded primer.
- Always apply RonaScreed Self Smooth Screed on to wet or tacky RonaScreed Self Smooth Primer.
- RonaScreed Self Smooth Screed is self smoothing but not self levelling. It must be levelled with a pin rake before spike rolling.
- RonaScreed Self Smooth Screed is a free flowing liquid consistency screed. It is essential that prior to pouring, adequate precautions are taken to ensure that the material is retained.

Joints
Where a day joint is formed to divide up an area of work, but is not required to accommodate movement, the joint should be formed to provide neat vertical edges to the poured areas of screed.
Where a stress relief joint is required, the joint should be formed to provide neat vertical edges to the screed. Alternatively, joints may be saw cut into the completed screed, which should be carried out as soon as the screed has hardened sufficiently, before any random cracking develops elsewhere.

Continued…….

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It is recommended that isolation joints are positioned in doorways.

Bay joints and movement joints in the substrate must be brought through into the topping.

Cleaning
RonaScreed Self Smooth Screed may be cleaned with a rotary scrubbing machine, using a pH neutral cleaning material. The uncoated screed will mark more quickly than one protected with a coating.
Tools and equipment should be cleaned with water immediately after use. Cured material can be removed mechanically.

Shelf life & storage
RonaScreed Self Smooth Screed 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.

Health & Safety
Refer to product 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 a 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. Liability for 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.

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