

**Technical Data Sheet**

# Ronascreed Self Smooth (formerly Ronascreed DB FastFloor)

## Heavy duty, industrial grade self-smoothing cementitious floor base screed and topping

**FEATURES**

- ✓ self smoothing cementitious floor screed
- ✓ high strength
- ✓ for levelling (Base) and wearing screeds (Topping)
- ✓ ready for foot and medium traffic after 3 / 18 hours
- ✓ internal use only
- ✓ self coloured grades available

**SPECIFICATION CLAUSES****1. Self Smoothing High Strength Wearing Screed**

The self smoothing wearing screed shall be Ronascreed Self Smooth Topping by Ronacrete Ltd, telephone +44 (0) 1279 638700. The primer is to be Ronascreed Self Smooth Primer. All materials to be applied in accordance with manufacturers instructions.

**2. Self Smoothing Levelling Screed**

The self smoothing levelling screed shall be Ronascreed Self Smooth Base by Ronacrete Ltd, telephone +44 (0) 1279 638700. The primer is to be Ronascreed Self Smooth Primer. All materials to be applied in accordance with manufacturers instructions.

**SUMMARY APPLICATION PROCEDURE**

1. prepare surface
2. apply Ronascreed Self Smooth Primer as a sealer 24 hours before laying screed
3. apply Ronascreed Self Smooth Primer as a primer immediately before laying screed
4. mix and apply Ronascreed Self Smooth
5. protect
6. overlay (Base) or traffic (Topping)

**Description**

Ronascreed Self Smooth is a flow applied industrial flooring system. It provides a hard, durable floor surface for new floors or for renovation and upgrade of existing surfaces. The material gains strength quickly and can be accessed by foot traffic in 3 hours and by light to medium traffic after 18 hours.

When applied correctly, Ronascreed Self Smooth produces a smooth, durable and industrial quality floor (Topping) or strong underlayment (Base). The application thickness can vary, ranging from 5mm to 25mm depending upon the grade selected. For optimum performance and appearance Ronascreed Self Smooth is applied by specialist industrial floor layers with expert knowledge of pre-treatment and post-treatment requirements.

**Composition**

Ronascreed Self Smooth is supplied as a free flowing cement based dry powder which requires a known quantity of clean water to produce a self-smoothing mix ready to pump or pour on prepared, sealed and primed surfaces. It is manufactured by blending with special cements, selective fillers and modified with polymers and flow admixtures. It is free of casien, other proteins and ammonia and consequently suitable for use in hospitals and food processing areas. It has been formulated carefully with a balanced chemistry and ease of use in mind.

**Uses**

Ronascreed Self Smooth provides a tough durable floor which is used in thin section to renovate and upgrade existing and new concrete floors. Its exceptional self smoothing quality allows for the closest of tolerances to be achieved rapidly. It can be pumped up to 1500m<sup>2</sup> per day; alternatively hand application of 600m<sup>2</sup> per day can be achieved.

It can be safely used in food processing plants, industrial buildings, warehouses and other locations where a high degree of wear resistance is required. Ronascreed Self Smooth is used extensively for upgrading floors to specified levels prior to the installation of high rise stacking systems. Ronascreed Self Smooth Base is used to level undulations and fill pockets prior to the application of Topping.

**Advantages**

- Self smoothing, does not require trowelling.
- Can be pumped or poured.
- Very fast application, hence minimum disruption and down time.
- Wide water tolerance window ensures proper performance.
- Resistance to industrial traffic.
- Economical - lower cost than resin based systems.
- Manufactured under a Quality Assurance Scheme to BSEN ISO 9002:1994.

**Note**

- For internal use only
- Occasional wetting or exposure to moisture is acceptable
- Continual exposure or contact with water will be detrimental to the screed
- Protection with a seamless and intact epoxy floor coating (eg. RonaFloor HB 100 or HB 200) will protect screed from water and chemical attack

**Achievable Surface Finish**

Ronascreed Self Smooth is designed to provide a fast to apply, rapid strength gain, hard wearing industrial floor finish (Topping) or a surface suitable to receive a further layer (Base), such as vinyl or coating. Due to the nature of the product the risk of air bubbles, 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.

**Preparation**

The condition of the surface to be treated is of great importance. The substrate must be mechanically prepared e.g. scabbled, milled or shot blasted. All laitance and contamination must be removed to leave a clean aggregate exposed finish. Testing and assessment to BS8204 Part 3:1993 should be conducted before proceeding with vacuum cleaning, sealing and priming.

**Damp Proof Membrane**

Surfaces subject to rising damp and moisture penetration must be treated with two coats of Ronascreed DPM damp proof membrane system prior to application of the Ronascreed Self Smooth system.

**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/m<sup>2</sup>. Allow to dry for not more than 36 hours; protect the surface and keep clean.

Note that inadequate sealing will increase the risk of air bubbles and pinholing. Very porous substates, including "Lytag" lightweight concrete, 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 glazed surface across the whole substrate with a gloss sheen is an indication.

**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/m<sup>2</sup>. Brush this well into the surface. Apply Ronascreed Self Smooth Base or Topping whilst primer is tacky; typically between 2-4 hours after application based on material, ambient and substrate condition of 20°C @ 65%RH.

*Continued on following page.....*

**Ronascreed Self Smooth**

# Ronascreed Self Smooth

## Note

- Remove any ponding of the primer.
- The primer must not be allowed to dry out before applying the Base or Topping.
- Always prime surface within 36 hours of sealing operation.
- Always apply Self Smooth Base or Topping on to tacky primer.
- Where Ronascreed Self Smooth Topping is to be applied on to Self Smooth Base apply one coat of Ronascreed Self Smooth Primer diluted with 5 parts water and one coat Ronascreed Self Smooth Primer with 3 parts water.
- Ronascreed Self Smooth is self smoothing but not self levelling. Major imperfections or deviations in the substrate may need to be made good before laying Ronascreed Self Smooth.
- Ronascreed Self Smooth is a free flowing liquid consistency screed. It is essential that prior to pouring, adequate precautions are taken to ensure that the material is not able to flow in to areas where damage could be caused, for example through joints or beneath raised access floors.

## Substrate Repair and Levelling

Where floors have suffered extensive damage or contamination, or where floor levels deviate more than 15mm, preparation work must be carried out using Ronascreed Self Smooth Base. Alternatively use Ronafix, Monoset or other Ronacrete mortar if more appropriate before applying Ronascreed Self Smooth Topping.

## 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.

## Mixing/Laying

Ronascreed Self Smooth is mixed and applied either by hand or specialist mixer/pump. For pump applications it is recommended that a contractor with the necessary experience to carry out this type of work is used. For a list of such contractors contact the Ronacrete Technical Department.

For hand applications place the specified quantity of clean potable water into a mixing vessel. Using a slow speed drill and paddle slowly add the Ronascreed Self Smooth to obtain a homogenous mix. The mixed material is poured or pumped onto the prepared and sealed/primed surface and levelled with a pin rake. Light spike rolling is necessary to release any entrapped air. Pins may be placed in the floor to set out the required levels. Pumped screeds should be filtered by a fine mesh attachment at the end of the hose.

## Multi-Layer Application

Always apply Ronascreed Self Smooth "Topping" in one pass only. Do not apply "Topping" over "Topping". "Topping" can be directly applied on the prepared and, sealed/primed substrate and/or sealed/primed "Base" screed at an application thickness between 5-15mm. It is essential to seal and prime between layers - refer to Substrate Sealing and Substrate Priming. When laying screeds in greater depths than stated in Table 1 it is possible to pour Ronascreed Self Smooth onto a layer of raked and levelled pea shingle. Refer to Ronacrete Technical Department for information.

## Application Temperature

The substrate and ambient temperature must not be less than 5°C on a rising thermometer at time of application. Materials should be at a temperature of 15°C - 20°C at time of application; lower temperatures will impair flow and surface finish. There should be light ventilation during and after laying. Apply the material within 20 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.

## Joints and Maximum Bay Width

It is recommended that dividing strips are used where a joint is required e.g. between a room and a corridor. Large areas should be sub-divided by using temporary dividing strips. Maintain a maximum bay width of 6-8m to ensure a wet edge.

## Water and Chemical Resistance

Ronascreed Self Smooth has good resistance to occasional exposure to water. However, if continual contact with water is expected or if attack from organic solvents, organic or inorganic acid is likely, the surface should be protected by a suitable resin based coating e.g Ronadeck EWB, HB100/200 or PU Sealer. This will also provide decoration and colour demarcation.

When applying a coating it is advisable to lightly mechanically prepare the surface in order to remove any weak surface film that may be present.

Where Ronascreed Self Smooth has not been over-coated it may be occasionally cleaned with a rotary scrubbing machine. It should be cleaned with a pH neutral based cleaning material. The uncoated screed will mark and become dirty more quickly than one protected with EWB or HB coatings.

## Cleaning

Tools and equipment should be cleaned with clean water immediately after use. Cured material can be removed mechanically or by acid etching.

## Packaging

Ronascreed Self Smooth is available in two grades and supplied in 25kg high density polythene lined bags. Deliveries from the factory are shrink wrapped.

## Shelf Life & Storage

Store in a cool dry place. Shelf life in correct storage conditions for sealed bags is 6 months. High temperature and high humidity will lead to a reduced shelf life.

*Continued on following page.....*

# Ronascreed Self Smooth

Table 1 PERFORMANCE DATA	BASE	TOPPING
Use	underlay / levelling screed	topping / wearing screed
Water addition on site	4.25 litres	4.5 litres
Flow properties - non pigmented (using 52mm diameter x 94mm long tube)	240mm - 270mm	275mm - 290mm
Flow properties - pigmented (using 52mm diameter x 94mm long tube)	n/a	flow reduced by up to 20% depending on colour
Workability	25 minutes	30 minutes
Foot traffic	3 - 4 hours	3 hours
Light traffic	levelling screed only; must be covered	18 hours
Application Thickness (min/max)	5mm/25mm	5mm/15mm
Bond strength (N/mm <sup>2</sup> )	-	>2.5
Shrinkage @ 28 days	-	0.016%
Abrasion resistance The British Cement Association Test Method	N/A	Special Class  Suitable for use in areas of severe abrasion
Slip Resistance (BS8204:Parts 3&4: 1993)	N/A	Dry 63 Wet 54 Acceptance criteria 35-64 Satisfactory 65+ Excellent
Drying Time Time taken for a 10mm sample to reach: 85% RH 75% RH	2 days 6 days	1 day 3 days
Pack size	25kg	25kg
Results shown are from samples mixed, conditioned and tested in ideal laboratory conditions. Site results will be lower. Drying times may be longer.		

Table 2		
RONASCREEDED SELF SMOOTH MATERIALS ESTIMATING GUIDE PER m <sup>2</sup> (FIGURES IN kg)		
SCREEDED DEPTH IN mm	BASE	TOPPING
5	9.25	8.875
10	18.5	17.75
15	27.75	26.625
20	37	n/a
25	46.25	n/a
SEALER and PRIMER DIVIDE SURFACE AREA BY 3.5 TO CALCULATE QUANTITY OF LITRES RONASCREEDED SELF SMOOTH PRIMER NEEDED FOR SEALING AND PRIMING  (e.g. 1000m <sup>2</sup> divided by 3.5 = 286 litres of Primer needed which is enough for one coat of sealer and one coat of primer)		

RONL 091 Issue 5 1st April 2010

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.



Ronacrete Ltd, Ronac House, Flex Meadow, Merring Way, Hartlow, Essex CM19 5TD, U.K.  
Tel: +44 (0)1279 638700 [www.ronacrete.co.uk](http://www.ronacrete.co.uk) [technical@ronacrete.co.uk](mailto:technical@ronacrete.co.uk)

Ronascreed Self Smooth