

RonaScreed Underfloor Heating Screed

Rapid drying additive for floating screeds



FEATURES

- promotes rapid drying of floor screeds
- only 30mm of cover over heating pipes
- reduces waiting time before laying floor coverings
- allows early foot trafficking
- can be purchased and applied by competent flooring contractors
- minimises site delays and access
- simple and cost effective
- can be pumped to raised levels

Description

RonaScreed Underfloor Heating Screed additive for site batched screeds is used to quickly reduce the level of retained moisture within the screed allowing floor coverings to be laid over the screed much sooner than with conventional screeds. It also promotes high early strength in compression, permitting early access by following trades.

RonaScreed Underfloor Heating Screed is supplied in concentrated form and used in low dilution. It provides rapid drying and early laying of floor coverings such as sheet vinyl, tiles, carpet etc.

When laying onto insulation the minimum screed thickness is 65mm. Heating pipes require a minimum cover of only 30mm of screed. RonaScreed Underfloor Heating Screed must be applied by competent screeding and floor laying contractors.

Drying Time of 50mm screed

Time to reach 80% RH (1:3)	4 day
Time to reach 80% RH (1:4)	7 days
Time to reach 80% RH (1:5)	11 days

Time to reach 75% RH (1:3)	8 days
Time to reach 75% RH (1:4)	11 days
Time to reach 75% RH (1:5)	18 days

Drying Time of 75mm screed

Time to reach 80% RH (1:3)	8 day
Time to reach 80% RH (1:4)	10 days
Time to reach 80% RH (1:5)	14 days

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Drying Time of 75mm screed (continued)	Time to reach 75% RH (1:3)	15 days
	Time to reach 75% RH (1:4)	15 days
	Time to reach 75% RH (1:5)	22 days

When applied at 65mm the screed will achieve 80% RH at the surface of the screed after 6 days and 75% RH after 12 days based on application and curing at 20°C and good drying conditions.

Physical Properties

When applied at 75mm a RonaScreed Underfloor Heating Screed will achieve 80% RH at the surface of the screed after 8 days and 75% RH after 15 days based on application and curing at 20°C and good drying conditions.

Poor drying conditions such as low temperature, high humidity and insufficient air movement will delay drying. If the screed is covered with a curing membrane such as polythene, then the drying time starts when the membrane is removed. The relative humidity (RH) at the surface of the screed should be measured with a hygrometer before proceeding to lay floor coverings; see BS 8203.

Yield and Coverage

Note that the screed mix designs are formulated to be covered with carpet, vinyl, tiles or other coverings and are not designed as wearing screeds or toppings. For wearing screeds, Ronafix or RonaScreed Self Smooth Topping should be used.

Physical Properties

Compressive Strength (1:3)	1 day	23N/mm ²
	28 days	44N/mm ²

Measuring Surface Drying

Compressive Strength (1:4)	1 day	20N/mm ²
	28 days	40N/mm ²

Compressive Strength (1:5)	1 day	18N/mm ²
	28 days	36N/mm ²

The above are typical laboratory results @ 20°C. Site strengths will be lower.

Mix Design (1:3) By weight (by volume)

Portland cement	50kg (1)
Medium sharp sand**	150kg (2.5)
RonaScreed Underfloor Heating Screed	1 litre
Water	15.7 litres approx*
Yield	0.09m³

Mix Design (1:4) By weight (by volume)

Portland cement	50kg (1)
Medium sharp sand**	200kg (3.5)

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Mix Design (1:4) (continued)	RonaScreed Underfloor Heating Screed Water Yield	1 litre 15.7 litres approx* 0.11m³
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Mix Design (1:5)	Portland cement Medium sharp sand** RonaScreed Underfloor Heating Screed Water Yield	50kg (1) 250kg (4.25) 1 litre 16.7 litres approx* 0.137m³
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* add diluted RonaScreed Underfloor Heating Screed to cement and sand to achieve working consistency

** mix designs are based on dry sand and aggregate. The amount of water added to the screed should be adjusted accordingly. Overdosing with RonaScreed Underfloor Heating Screed will not improve drying and may even extend drying times.

Estimating Guide	1:3 Mix	
	Required per m ² @ 50mm	0.55 litres
	Required per m ² @ 75mm	0.825 litres
	Required per m ³	11 litres
	1:4 Mix	
	Required per m ² @ 50mm	0.44 litres
	Required per m ² @ 75mm	0.66 litres
	Required per m ³	9 litres
	1:5 Mix	
	Required per m ² @ 50mm	0.36 litres
	Required per m ² @ 75mm	0.54 litres
	Required per m ³	7.3 litres

Drying and Hardening

Floor screeds incorporating RonaScreed Underfloor Heating Screed dry out more quickly than unmodified screeds and will generally accept foot traffic after 24 hours only. Vinyl floor coverings and tiles can be laid over a RonaScreed Underfloor Heating Screed surface as soon as 12 days after laying (for a 65mm screed).

The durability and hardness of a RonaScreed Underfloor Heating Screed floor is superior to standard floor screeds due to its high density, compressive strength and impact resistance.

Mix Components and Design

The basic components of a RonaScreed Underfloor Heating Screed systems are cement (BSEN197-1 CEMII), sand from grade C or M of table 5 of BS882, RonaScreed Underfloor Heating Screed and clean water. The water content shown in mix designs must be adhered to; the use of insufficient

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Mix Components and Design (continued)

water will fail to fully hydrate the cement and will produce a lower performance screed.

Aggregate Water Content

If damp sand is used the amount of water should be adjusted accordingly. RonaScreed Underfloor Heating Screed mix 1 gives a water/cement ratio of 0.29 and yields approximately 0.1m³. This mix design can be leaned out to 1:4 or 1:5 (cement : sand) by weight if preferred, but strength will be reduced and the screed will take longer to dry.

Instructions for Use

Surface Preparation

The surface on to which RonaScreed Underfloor Heating Screed is to be applied must be clean and the insulation board must be appropriate for the application, joints must be taped..

Mixing

RonaScreed Underfloor Heating Screed must be mixed using a forced action mixer to ensure full dispersion of the contents. Dry mix the cement and sand then dilute RonaScreed Underfloor Heating Screed with 5-8 litres of clean water and add to the mix. Add more clean water as required to achieve the correct gauging liquid content. The screeder should be able to make a ball of the mixed mortar and pull it apart without crumbling of the mortar. The mix must not be overdosed with RonaScreed Underfloor Heating Screed liquid.

Laying

Standard screeding practices should be followed. The mortar must be placed as soon as possible after mixing and well consolidated. Conventional tools such as float and trowel are used to obtain the desired surface finish.

Joints

Isolation joints should be installed around the perimeter of the floor, in doorways and around columns, manholes and other fixed elements. Bay proportions should preferably not exceeded 2:1 length to width ratio, to limit uneven curing stresses. Where separate heating zones occur within the same floor area, a joint must be positioned in the screed between the zones.

Curing

Curing must commence as soon as possible after finishing the screed. Cure the screed with tight fitting polythene, placed on to the screed as early as possible without damaging the surface. Cover for 24 hours then remove and air cure.

Pumping

RonaScreed Underfloor Heating Screed modified screeds can be pumped to the point of laying. Tests have been conducted using Putzmeister equipment and specific guidance should be sought from Ronacrete Ltd.

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Contractors

Unlike other screeds of a similar nature RonaScreed Underfloor Heating Screed can be purchased and applied by competent screeding contractors throughout the country.

The use of RonaScreed Underfloor Heating Screed is simple and straightforward and satisfactory performance will be achieved provided the correct methods are followed. There are obvious advantages in selecting a contractor who has previous experience of the material but if requested the Ronacrete Technical Department will provide guidance and assistance to other contractors.

Ronacrete Ltd maintains a list of national and local contractors who are familiar with this type of flooring system and their application procedure.

Other Flooring Materials

Depending on the specific requirements of the floor system being laid Ronacrete may recommend an alternative product and specification which may be more suited to the application.

To discuss the use of Ronacrete materials for any application please contact the Ronacrete Technical Department for full technical and practical guidance at design and specification stage together with site assistance and practical backup.

Packaging

RonaScreed Underfloor Heating Screed is supplied in 20 and 210 litre units.

Shelf Life and Storage

Shelf life in unopened containers is 9 months. Store in a cool dry place. Protect from frost.

Health and Safety

RonaScreed Underfloor Heating Screed is non-flammable and harmful by ingestion. Prolonged contact with skin should be avoided. Any splashes should be washed well with water. If contact with eyes occurs wash thoroughly with water and seek medical advice.

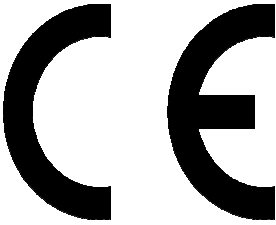
Site Attendance

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.



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Ronacrete Ltd, Flex Meadow, Harlow Essex, CM19 5TD, UK 13 0836-CPR-13/F043
BS EN 934-3 Admixtures for Masonry Mortar
Product: RonaScreed Underfloor Heating Screed Chloride ion content: $\leq 0.1\%$ Dampness Test: 75% RH at 20C at 15 Days 75mm depth of 1:3 cement / sand mix

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.