

RonaScreed FastDry Prompt

Fast drying screed additive



FEATURES

- will accept foot traffic after 24 hours @ 20°C
- rapid drying—can receive floor coverings such as vinyl, tiles and carpet after 4 days @ 50mm, 6 days at 75mm and 100mm thick
- rapid early strength development
- liquid admixture disperses quickly and fully in the gauging liquid
- apply as a bonded screed from 25mm, unbonded from 50mm and floating from 65mm
- compatible with underfloor heating
- compressive strength in excess of 40N/mm² can be achieved after 28 days, see mix design
- suitable for screed pumps
- concentrated admixture saves packaging waste

Description

RonaScreed FastDry Prompt screeding 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. RonaScreed FastDry Prompt gains strength quickly, permitting early access by following trades.

RonaScreed FastDry Prompt is supplied in concentrated form and used in low dilution. It promotes rapid drying and early laying of floor coverings such as sheet vinyl, tiles and other non pervious floor coverings.

RonaScreed FastDry Prompt is typically incorporated within 25mm to 100mm thick floor screeds and applied by competent screeding contractors. RonaScreed FastDry Prompt is simple and straightforward to use and can be purchased and laid by non-licensed screeding contractors.

Drying Times

Mix Designs 1 and 2	50mm	75mm	100mm
Time to achieve 80% RH	5 days	6 days	7 days
Time to achieve 75% RH	8 days	9 days	10 days

Mix Design 3	50mm	75mm	100mm
Time to achieve 80% RH	3 days	2 days	2 days
Time to achieve 75% RH	4 days	6 days	6 days

Mix 1 (see page 2) independently tested by VINCI Technology Centre UK Limited – Certificate No. 29891
The accepted relative humidity at the surface of a screed for the laying of vinyl floor coverings, tiles etc is 75%.

The data is based on drying @ 20°C and 60±5% relative humidity. Low temperature, high humidity, increased screed thickness and changing the mix

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Drying Times (continued)

design 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, **as required by BS 8203 Annex B**, before proceeding to lay floor coverings. Standard practices should be followed. Drying time on site will vary according to site conditions. Increased screed thickness, lower temperature and higher humidity will lengthen the drying period; increasing the aggregate/ cement ratio will also increase drying time. Dehumidifiers should not be introduced until the screed has gained sufficient strength and lost sufficient moisture to reduce the risk of cracking and a 75mm thickness of screed should be allowed to dry naturally for 6-14 days approximately, depending on temperature.

Compressive Strength

1 day 23N/mm²
 28 days 48N/mm²
 The above are typical laboratory results @ 20°C. Site strengths will be lower.

Use of Dehumidifiers

Screeds should be sufficiently dry and strong before forced drying commences, at a temperature of 20°C and air humidity of 60-65%, RonaScreed FastDry Prompt dries to 80% RH after 5-7 days of air curing between 50mm and 100mm thickness, and will gain a high proportion of its ultimate strength after the same period of curing. Forced drying should be delayed at lower temperature and when air humidity is high.

Commissioning of Underfloor Heating Systems

Screeds should be sufficiently dry and strong before commissioning of underfloor heating commences, at a temperature of 20°C and air humidity of 60-65%, RonaScreed FastDry Prompt Mixes 1 and 2 dry to 80% RH after 6-7 days and Mix 3 dries to 80% RH after 2 days of air curing between 75mm and 100mm thickness, and will gain a high proportion of its ultimate strength after the same period of curing. At this stage, underfloor heating may be turned on and the temperature may be gradually increased in accordance with the instructions of the heating manufacturer. Commissioning should be delayed at lower temperature and when air humidity is high, but it should still be possible to use the heating system to reduce drying time at lower temperature, which may be important in thicker sections of screed.

Mix Designs

	Mix 1	Mix 2	Mix 3
Use	Medium to heavy duty	Heavy duty	Medium to heavy duty
Portland cement (CEM II 42.5)	50kg	50kg	50kg
0/4mm screeding sand	150kg	100kg	150kg
5/10mm granite	-	100kg	-
RonaScreed FastDry Prompt	1 litre	1 litre	2 litres
Water	Typically up to 8 litres	Typically up to 8 litres	Typically up to 8 litres
Yield per mix	0.1m ³	0.1m ³	0.1m ³

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Consumption Rate

	Mix 1	Mix 2	Mix 3
Required per m ² @ 50mm	0.5 litres	0.5 litres	1 litre
Required per m ² @ 75mm	0.75 litres	0.75 litres	1.5 litres
Required per m ² @ 100mm	1 litre	1 litre	2 litres
Required per m ³	10 litres	10 litres	20 litres

Separation from drying concrete

Drying concrete must be separated from the screed by polythene or RonaScreed DPM surface damp proof membrane. Screeds thicker than those referred to will take longer to dry out. Screeds which are wetted during **or after** their application or curing will take longer to dry out.

Note that RonaScreed FastDry Prompt screeds are designed 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 Smoothing Topping should be used.

Areas of Use

RonaScreed FastDry Prompt screeds can be laid in the following situations:

- bonded to concrete slabs
- bonded to existing screeds
- unbonded on slip membrane (minimum thickness 50mm)
- bonded to suitable bonded damp proof membrane such as RonaScreed DPM (minimum 25mm thickness)
- **floating on insulating board or acoustic layer (minimum thickness 65mm residential only, all others 75mm)**

Bonded, Unbonded and Floating Screeds

RonaScreed FastDry Prompt screeds can be laid either bonded, unbonded or floating, determined by the substrate type. Bonded screeds must be laid on to a suitably prepared substrate (see Surface Preparation). Unbonded screeds are those laid on a slip membrane. Floating screeds are those laid on to an insulation board or acoustic layer.

Bonded Screed (from 25mm)

- suitable substrate, mechanically prepared
- prime with Ronacrete Standard Primer

Bonded Screed (from 50mm)

- suitable substrate, mechanically prepared
- primer with cement : water (2:1)

Unbonded Screed (from 50mm)

- solid substrate on 500 gauge polythene or other suitable slip membrane

Floating Screed (65mm minimum)

- **Light residential use only**
- insulation board or acoustic layer

Floating Screed (75mm minimum)

- **All uses other than light residential**
- insulation board or acoustic layer

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Damp Proof Membrane

A damp proof membrane should be present under the concrete slab to prevent moisture penetration from below. If no membrane is present or if the concrete is drying, apply two coats of RonaScreed DPM or install a sheet or similar membrane. If RonaScreed DPM is laid on to a clean, sound and correctly prepared substrate as specified in the RonaScreed DPM data sheet it is possible to lay RonaScreed FastDry Prompt at a minimum thickness of 25mm, bonded to the RonaScreed DPM with a primer of Ronafix and cement.

Mix Components and Design

The basic components of a RonaScreed FastDry Prompt screed are Portland cement (CEM II 42.5), 0/4mm screeding sand, **RonaScreed FastDry Prompt and sufficient clean water, failure to add sufficient water will not fully hydrate the cement and the screed will be more difficult to compact, especially when the screed is laid floating.** Larger sized aggregates are used for concrete or granolithic finishes; see Table 4 of BS882.

RonaScreed FastDry Prompt Mix 1 yields approximately 0.1m³. The density of the cured screed is approximately 2000-2100kg/m³. This mix design can be extended to 1:4 (cement: sand) by weight if preferred, but strength will be reduced and drying time will be extended.

Instructions for Use

Surface Preparation

The surface on to which a RonaScreed FastDry Prompt screed is to be bonded must be clean, structurally sound and stable. All grease, oil, laitance and loose material must be removed. The surface must be keyed to expose the aggregate and to provide good adhesion. This is best achieved by scabbling, planing or shot blasting. The prepared surface must be cleaned (ideally by vacuum), damped with clean water and excess water removed.

Mixing

RonaScreed FastDry Prompt must be mixed using a forced action mixer. Dry mix the cement and sand then add the RonaScreed FastDry Prompt liquid followed by sufficient clean water to produce a workable mix and fully hydrate the cement. The screeder should be able to make a ball of the mixed mortar and pull it apart without crumbling of the mortar.

Priming

The prepared surface must be thoroughly damped with clean water and the water allowed to soak in.

Excess water must be removed and the appropriate bond coat applied. For screeds up to 50mm thickness a mix of 1:1 Ronafix: Portland cement brushed in to the surface or, over 50mm thickness, a 2:1 cement/water slurry. Before this dries the screed must be laid. If the bonding coat dries it must be vigorously scratched and reapplied.

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.

Embedded Conduits and Pipes

When laying conduits or pipes within RonaScreed FastDry Prompt screeds the conduit or pipe should be a minimum of 25mm beneath the top surface. It

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Instructions for Use (continued)

is advisable to incorporate reinforcing mesh centrally within the depth of the screed over the conduit or pipe, extending for not less than 150mm each side to minimise the risk of cracking.

Joints

Bay proportions should not exceed 3:2 length to width, joints should be positioned as follows:

- construction joints in the substrate must be expressed through into the screed
- movement joints in the substrate must be expressed through into the screed
- when laying on suspended floors, movement joints should be installed in the screed over support positions to accommodate movement
- isolation joints should be installed around the perimeter of the floor and around columns, manholes and fixed spaces to accommodate movement
- heated screeds may require movement joints positioned to limit screed bays to a maximum of 40m² with a maximum bay length of 8m. This applies when rigid floorings and some types of resilient flooring are to be applied
- separate heating zones should be divided by expansion joints

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 FastDry Prompt 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.

Contractors

Unlike other screeds of a similar nature RonaScreed FastDry Prompt can be purchased and applied by competent screeding contractors throughout the country. Ronacrete Ltd maintains a list of national and local contractors who are familiar with this type of flooring system and their application procedure. The use of RonaScreed FastDry Prompt 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.

Other Flooring Materials

Depending on the specific requirements of the floor system being laid Ronacrete may recommend an alternative product 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 FastDry Prompt is supplied in 20, 210 and 1000 litre units.

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Shelf Life and Storage

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

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.


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BS EN 13813 Floor Screed
Product: RonaScreed FastDry Prompt Compressive Strength: \geq C40 Flexural Strength: $>$ F7 Wear Resistance BCA method: AR2 Release of Dangerous Substances: Refer to Safety Data Sheet

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.