

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 8 days @ 50mm, 9 days at 75mm and 10 days @ 100mm thick
- rapid early strength development
- liquid admixture disperses quickly and fully in the gauging liquid
- apply as a bonded screed from 35mm, 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 materials including the range of RonaFloor Epoxy and Polyurethane coatings (refer to Ronacrete Technical Department).

RonaScreed FastDry Prompt is typically incorporated within 35mm 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

	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 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 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 before proceeding to lay floor coverings. Standard practices should be followed.

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Compressive Strength

1 day 23N/mm²
28 days 48N/mm²

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

Drying of RonaScreed FastDry Prompt

Drying of RonaScreed FastDry Prompt has been tested at 50mm, 75mm and 100mm thickness. At 50mm thickness, 20°C temperature and 60-65% air humidity, RonaScreed FastDry Prompt dries to 75% RH after 8 days of air curing, under the same conditions at 75mm thickness, RonaScreed FastDry Prompt dries to 75% RH after 9 days of air curing and again under the same conditions at 100mm thickness, RonaScreed FastDry Prompt dries to 75% RH after 10 days of air curing. 75% relative humidity at the surface indicates that the screed is sufficiently dry for application of resilient floorings, carpet, quarry tiles, ceramic tiles and stone tiles. 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.

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 dries to 80% RH after 6-7 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.

Approximate Yield

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

Mix Design

Mix 1—Medium to heavy duty Portland cement (CEM 11 42.5)	50kg
0/4mm Screeding Sand	150kg
RonaScreed FastDry Prompt	1 litre
Water	Up to 18 litres
Yield per mix	0.1m ³ approx.

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Bonded, Unbonded and Floating Screeds (continued)

Mix 2—Heavy duty	
Portland cement (CEM 11 42.5)	50kg
0/4mm screeding sand	100kg
5/10mm granite	100kg
RonaScreed FastDry Prompt	1 litre
Water	Up to 18 litres
Yield per mix	0.125m ³ approx.

Note that water addition of both mixes will depend on aggregate water content.

Surface Drying

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 their application or curing will take longer to dry out.

Note that RonaScreed 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 35mm thickness)
- on insulating board or acoustic layer (minimum thickness 65mm)
- unbonded (minimum thickness 50mm)

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 35mm)

- 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 duty use
- insulation board or acoustic layer

Floating Screed (75mm minimum)

- Heavy duty use
- 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 35mm, 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 clean water, the water content shown in mix designs must be adhered to, dry mixes will fail to fully hydrate the cement. Larger sized aggregates are used for concrete or granolithic finishes; see Table 4 of BS882.

RonaScreed FastDry Prompt Mix 1 yields approximately 0.1m^3 . The density of the cured screed is approximately $2000\text{--}2100\text{kg/m}^3$. 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 is advisable to incorporate reinforcing mesh centrally within the depth of the

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Instructions for Use (continued)

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.

Shelf Life and Storage

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

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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.

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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.