

# SPEED SCREED

## Flowing Screed



**Glendinning**  
QUARRY & CONCRETE PRODUCTS

### WHAT IS SPEED SCREED

Glendinning Speed Screed Flowing Screed is a blend of Gyvlon synthetic anhydrite binder and selected aggregates mixed with clean water to produce, under control conditions, a flowing pumpable screed.

### USES

Glendinning Speed Screed Flowing Screed is designed to provide a smooth level surface in most commercial and domestic buildings prior to the application of floor finishes and is particularly suitable for use as a floating screed with under-floor heating systems.

#### KEY FEATURES

- Increased productivity - 2000m<sup>2</sup>/day can be easily achieved. (average 500-1000 m<sup>2</sup>/day).
- Can be walked on in 24-48 hours.
- Extremely low shrinkage - does not curl with minimal risk of cracking.
- Suitable for floating floor construction.
- Ideal for use with under-floor heating systems enabling rapid commissioning of the underfloor heating in accordance with BS EN 1264:2001- Part 4 clause 4.4.
- Weight saving as a result of thinner section.
- Large bay sizes of up to 30-40 linear meters depending on application.
- Dries at a rate of 1mm per day up to a screed depth of 40mm however this can be affected by adverse site conditions.
- Can be force dried as early as 7 days after laying.
- Easily achieves SR2 finish as described in BS 8204.
- Protein free - cannot harbour harmful bacteria.
- Non combustible (tested to BS 476 Part 4).
- Minimal thermal expansion (0.012mm/mK).
- Excellent thermal conductivity (2.2 W/mK).
- Produced to a controlled flowing consistency to fully encompass heating pipes.
- Elimination of voids resulting in uniform heat transfer and maximised thermal efficiency of the under floor heating system.
- Reduced screed depth when compared to traditional sand cement screeds minimising heat storage, resulting in a floor which responds rapidly to user requirements.
- Does not require reinforcement.
- Environmentally friendly.



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### TECHNICAL DATA

Appearance/Colour:	Off-white fluid mortar
Water Demand:	13-15% b.w.
pH:	>10
Wet Density:	2200kg/m <sup>3</sup>
Dry Density:	2000kg/m <sup>3</sup>

#### COMPOSITE SCREED PROPERTIES (TYPICAL)

Nominal 750kg/m<sup>3</sup> Gyvlon Binder + Standard Sand to BS EN12620 and 13.5% water.

Flow:	DIN 1060 Flow Ring 230 - 270mm
Setting Time:	EN 196-3:1994 Vicat
Initial Set	> 300 Mins
Final Set	< 660 Mins

#### COMPRESSIVE STRENGTH:

3 days	> 15N/mm <sup>2</sup>
28 days	> 30N/mm <sup>2</sup>

#### FLEXURAL STRENGTH:

7 days	> 3 N/mm <sup>2</sup>
28 days	> 8 N/mm <sup>2</sup>

#### MINIMUM APPLICATION THICKNESS

Bonded:	25mm
In Contact with Substrate	30mm
Unbonded:	30mm
Floating Commercial:	40mm
Floating Domestic:	35mm
Underfloor Heating:	30mm minimum cover to pipes

### DELIVERY

Glendinning Speed Screed is supplied in bulk from the mixing plant to site in mixer trucks.

### HEALTH & SAFETY

Some of the components of this product may be hazardous during mixing and application. Please ensure that you warn all recipients handling the wet product that it can seriously harm skin. Wear correct protective clothing and where contact occurs either directly or through saturated clothing please wash thoroughly.

### KEY INSTALLATION POINTS

- As the producer of Speed Screed we recognise a number of approved laying contractors to ensure and maintain high standards. We strongly recommend the use of an approved laying contractor, details of whom are available from our sales office.
- The area to be screeded must be made water tight to prevent leakage.
- The polythene slip membrane installed over the insulation must be overlapped and sealed (taped) to prevent loss of screed.
- Pipes or cables must be securely fixed to prevent floatation and lifting during application of the screed.
- Minimum cover to pipes or cables must be 30mm.
- If required surface laitance must be removed prior to commissioning of under floor heating.
- Best practice is to fill pipes prior to application of the screed to check for leaks, this also reduces the risk of pipes floating whilst the screed is being poured.
- Heating should be commissioned in accordance with BS EN 1264:2001 Part 4 clause 4.4 to accelerate force drying of the screed prior to application of the floor finish.
- Screed moisture content must be a maximum of 0.5% and 1.0% respectively prior to application of subsequent impermeable and permeable floor coverings.
- The building envelope should be sealed before preparation commences.
- Where applicable a suitable damp proof membrane must be present below the screed or the base.

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### SUBSTRATE PREPARATION

Substrate Preparation - The area to be screeded must be made water tight to prevent leakage.

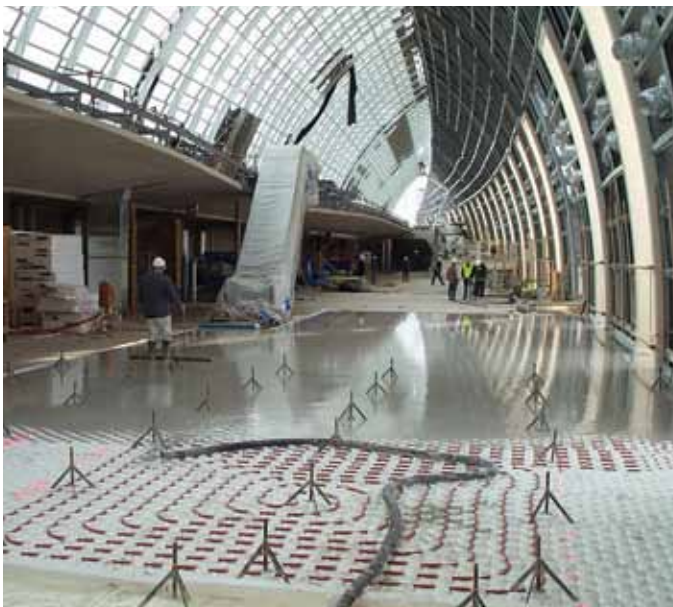
#### NOTE:

- (i) Damp substrates such as concrete bases can result in considerable delays/extension of screed drying time.
- Remove all dust and debris ensuring any items which may puncture the surface membrane or resilient layers have been removed to leave a substrate free from contamination.

### UNDERFLOOR HEATING

Generally the recommended maximum bay size when used in conjunction with the underfloor heating is 300m<sup>2</sup>. Underfloor Heating manufacturers have their own guidelines for the positioning of movement joints within the screed; however it is important to note that a joint should be present between two independent heating circuits to allow for thermal movement within the screed and differential temperature gradients.

It is also necessary to note that the shape of the room can also affect the requirements for bay joints.



### INSTALLATION OF THE SCREED

#### Site Conditions During Application and the First Three Days Following Installation

As with all screeds the performance and finish achieved with Speed Screed can be affected by the conditions on site in which it is installed and for a short period afterwards. The following watch points should be adhered to during this time.

- Wherever possible avoid water ingress to completed screeds removing any standing water as soon as possible. Whilst under water the screed may suffer a minor loss of strength, however this will be regained when it dries out.
- Do not lay at temperatures of 30°C and over - high temperatures extend setting times and may reduce the final strength of the screed.
- Protect from frost. Apply the same winter working restrictions as when placing concrete, i.e. work should stop at temperatures of 5°C and falling and may resume again at 3°C and rising.
- Providing internal temperatures are maintained work may continue when the outside temperatures are as low as 2°C.
- After laying and until the screed has hardened, protect the surface of the screed from water ingress, severe draughts and direct sunlight.
- Maintain a relative humidity of 50% and above in the air above the screed during the first 48 hours after laying.
- Do not cover the screed, this is not necessary and will only delay final drying.
- Access to the screed should be restricted for between 24 and 48 hours to prevent damage to the screed surface before it hardens.
- Speed Screed is not a wearing surface, and protection from other construction trades may be necessary in areas of heavy use such as loading bays.

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### SCREED DRYING TIME

- Speed Screed should be protected from rapid drying within the first 3 days after application however in common with other screeds, it is very important that good drying conditions are provided as soon as the screed is laid.
- Under like for like conditions Speed Screed dries at the same rate as a traditional sand and cement screed, approximately 1mm/day up to 40 mm thickness and then at a rate of 1/2 mm per day for thickness above this:

#### EXAMPLE:

50mm Speed Screed Drying time under ideal drying conditions:

(40mm @ 1mm/day) + (10mm @ 1/2 mm per day)  
= 60 Days (2 months).

- Drying times can be improved by the provision of good ventilation, open windows and doors in good weather, removal of laitance as recommended, the use of dehumidifiers and by force drying of the screed using under floor heating.
- Forced drying of Speed Screed using dehumidifiers or commissioning of underfloor heating systems in accordance with BS EN 1264:2001 Part 4, can begin 7 days after laying the screed.

### REMOVAL OF SURFACE LAITANCE

Occasionally it will be necessary to sand the surface of a Speed Screed to remove surface laitance, however when subsequent floor finishes are to be fixed to the screed the laitance must be removed prior to application of an approved primer/sealer. In ideal conditions sanding should be possible 1 - 3 weeks after laying but this can be greatly influenced by conditions within the building envelope with damp or humid environments likely to extend this considerably.

It is advantageous to remove the laitance at early ages whilst it remains weak and friable however if left in place a small delay to drying times may result and effective removal may be more difficult to accomplish.

### DETERMINATION OF RESIDUAL MOISTURE CONTENT

Prior to sealing/priming and the application of subsequent floor finishes the residual moisture content of a Speed Screed should be checked by the floor finishes contractor. This can be accomplished by the Hair Hygrometer test. The test method defined in BS8203 is non destructive and provides reliable results for calcium sulphate based screeds.

