

Screeds survey

Hard facts

Correct specification of screeds is vital if the floor is not to fail:

Creom UK is working with main contractor Balfour Beatty and contractor McGarry Flooring on the new £100m Stobhill Hospital in Scotland. Due for completion next year, the hospital has a total floor area of 30,000sq m on four floors.

Creom has supplied its moisture suppressant on government and PFI projects, including schools, universities, hospitals, HMSO projects and prisons.

The company claims that its product offers many advantages over traditional DPM epoxy systems as it requires no mixing; there is no waste; it is applied by roller or spray; and is 'environmentally friendly'.

With fast and clean application, cost savings on both labour and area covered are substantial, says Creom.

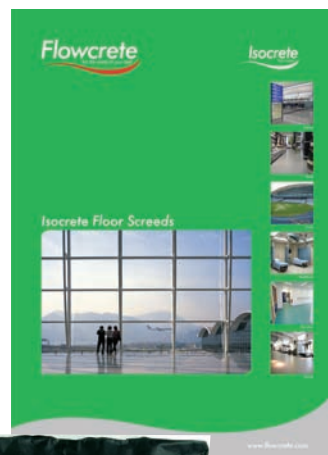
F Ball and Co's Stopgap 900 DPM-Prep, a two-component smoothing underlayment, is claimed to be the only product formulated for use under waterproof surface membranes. It's low expansion is said to stop the smoothing compound expanding and causing the surface DPM to fail. It is designed for use under Stopgap F75 and F76 waterproof surface membranes. By providing a smooth surface, it is reported to cut the amount of DPM required compared with application to rough, uneven surfaces. It is also designed to be compatible with Stopgap Isolator membrane.

Stopgap 900 is mixed with Stopgap 900 Acrylic Liquid and is fast set with good self-smoothing properties, according to F Ball. It is protein-free with low-odour and can be applied in thicknesses from 3-20mm. www.f-ball.co.uk

Floorwise has developed subfloor preparation products designed to work harmoniously



The new Stobhill Hospital in Scotland where Creom moisture suppressant is being used



ABOVE LEFT: Flowcrete's new Isocrete brochure ABOVE RIGHT: Topcem hydraulic binder from Mapei LEFT: New Screedmaster 2 Ultimate from Laybond



together. Floorwise F5007 Pro Screenshot Surface Membrane Once is a one-coat liquid DPM for power floated concrete or sand & cement screeds with a RH value of up to 95%.

Floorwise says F5000 Pro Screenshot two-part smoothing compound should be used in conjunction with F5000 SBR liquid.

F5000 LX allows the smoothing compound to be applied over most substrates and can smooth subfloors by up to 6mm unfiled or up to 10mm with a granite aggregate, it says. F5000 LX has a walk-on time of three hours and will allow the floating installation of floors such as laminate after just 24 hours,

according to the company.

In direct stick applications, F5000 SBR should be left to cure for at least 24 hours. F5000 SBR liquid is a low-odour protein and ammonia free latex suitable for floating floors.

www.floorwise.co.uk

Flowcrete UK has a new Isocrete floor screeds brochure on the different systems, including thickness levels, compressive strength and drying times. It also covers Isocrete Acoustic K for acoustic needs and the underfloor heating system, Isowarm.

Isocrete K is designed to allow for early installation of sensitive finishes, while its low shrinkage formulation is said to minimise the risk of cracking. It has high abrasion qualities, offering excellent impact resistance, according to the company.

Produced for almost 40 years, Isocrete screeds are claimed to speed up construction programme times.

www.flowcrete.co.uk

Laybond has launched Screedmaster 2 Ultimate, a protein and casein-free screed for smoothing uneven subfloors before laying decorative floorcoverings.

In distinctive black packaging, Screedmaster 2 Ultimate is designed for use in biologically sensitive areas with its low-odour formulation making it equally suitable for use in occupied buildings. Said to have excellent workability and flow characteristics, the product is self-smoothing and can be trowelled to a feather edge.

It can be applied on most substrates including concrete, sand/cement screeds, stone, anhydrite (calcium sulphate), rigid metal, terrazzo and quarry tiles, asphalt as well as old adhesive residue, depending on preparation, and old bituminous residues, says Laybond.

It is claimed to accept foot traffic after 1.5 hours and allow loose lay floorcovering to be installed after eight hours. It comes in 23 kg bags with a data sheet.

Mapei says its fast drying Topcem product replaces cement in sand & cement screeds. This allows ceramic tiles to be laid after 24 hours, stone materials after three days and even resilient materials in four days, according to the company.

The manufacture of Topcem is claimed to produce less carbon dioxide and use less energy than traditional screeds.

The product has been specified for high profile projects including Heathrow T5, Gatwick Airport, the Hurlingham Club and schools nationwide, says Mapei.

The company also offers Mapecem, described as a fast setting and drying hydraulic binder for shrinkage compensated screeds that permits the installation of ceramic tiles after just four hours and resilient flooring after 24 hours.

The fast-track range includes Topcem Pronto and Mapecem Pronto which contain the required aggregates so are ready to use and just need to be mixed



RIGHT: The range of floor preparation products from Floorwise



Screeds survey

in conjunction with conventional warm water or low voltage (and even some high voltage) UFH systems.

It is reportedly specified as a fast-track damp proofing layer in sports floor renovation. Loose laid, the edges of each 2m wide strip are joined with Platon Stop Tape.

Platon Stop is claimed to offer three times more water vapour resistance than film membranes and eliminates the need to install a foam underlay. It's said to be suitable for installation under laminate and wood floors, including glue-free ones. The construction height is 2.5mm. www.triton-chemicals.com **CFJ**

BUYERS' GUIDE

For further information on any of the products mentioned, contact the suppliers directly. And please remember to tell them that you read about their companies in **CFJ**.

CMS Acoustics	01925 577711
Creom	01732 874954
F Ball	01538 361633
Floorwise	01509 673974
Flowcrete	01270 753000
Laybond	01785 272727
Mapei	0121 508 6970
Maxit	01928 515656
Preparation Group	0870 224 3606
Resin Surfaces	0161 483 1232
Schluter	01530 813396
Sika	01707 363866
Triton Chemicals	020 8310 3929

Paul Absolon, CMS Acoustic Solutions technical director, explains the key issues when selecting and installing an under screed product:



SCREED isolation offers a cost effective and high performance solution where developers need to exceed minimum Part E impact sound standards.

Designed for new build developments where increased acoustic performance is required, under screed materials provide an effective acoustic resilient layer designed to isolate the screed from the main building structure by reducing impact energy from general footfall and other noise sources.

■ **Which product?** Under screed products offer various levels of acoustic isolation. Always consider

Selecting a DPM: It's 'horses for courses'

Kevin Dodds, business manager at Triton Chemicals, explains the issues when selecting damp proof membranes:



SPECIFIERS and flooring contractors faced a confusing choice of damp proof membranes (DPMs) and it's an area where there are no hard and fast rules.

Broadly speaking the choice is between a liquid applied system or a sheet 'isolator' membrane, but key factors to take into account include:

1. Construction of subfloor;
2. Size of the floor;
3. Cause of dampness – ie temporary dampness caused by construction moisture or a severe and permanent rising damp problem;
4. Deadline for installation of the floor finish; and
5. Other requirements from the DPM in addition to damp control – such as ground gas control, contamination barrier or sound/impact absorption.

For typical domestic projects, or jobs where the DPM is installed in small sections, a liquid applied membrane is the most practical solution.

Sheet isolator membranes are normally supplied in 40m rolls and the potential wastage will prohibit their use in many small jobs.

Both liquid applied or sheet isolator DPMs are suitable to damp proof new or existing concrete subfloors. Sheet isolator DPMs are the more effective choice for damp proofing the irregular surface of an old brick or flagstone floor.

They should also be specified if delays before installation of the final floor finish are not acceptable. A sheet isolator DPM can be installed as soon as new concrete is dry enough to walk on and a floating or bonded floor installed immediately.

Certain sheet isolator DPM are particularly suitable for



upgrading floors contaminated with oil or other chemicals as, in addition to their waterproofing properties, they can prevent contamination of the floor finish. For domestic or sports floor applications their sound absorption properties may be important.

Where there are very high levels of moisture in a floor, certain liquid applied products may not adhere to very damp surfaces so care should be taken in the selection of an appropriate brand.

In cases of severe rising damp caused by ground water levels, the floor will never dry out, and this is almost always a case for the specification of a studded sheet isolator DPM to provide a permanent air gap between the membrane and the finished floor.

Where a bonded floor finish is to be installed, compatibility between the adhesive and the DPM (liquid or sheet) is of course an essential consideration.

This short article demonstrates how many factors come into play before selecting the most appropriate DPM. One short answer is to approach a knowledgeable manufacturer of both types of system, who can recommend the most appropriate solution once every aspect of the application has been considered. **CFJ**

'Under screed products are a way to acoustic isolation'

compatibility between the acoustic material and subfloor type.

For example, with pre-cast concrete floors, specify under screed materials made from recycled rubber crumb. Suitable for use with all types of floor screeds, these rubber-bound products offer a cost effective solution.

Where the subfloor is a beam and block construction, a denser rubber material is required. This is because beam and block floors have lower natural sound insulation features.

The only Robust Detail approved under screed for beam and block floors is made from high-density recycled rubber tyre crumb and has a 'dimpled' surface one side.

Low density in the context of an acoustic under screed product is deemed to be below 100kg/cu m, while high density is generally above 500kg/cu m. Impact sound performance is enhanced by the dimpled surface, which increases air movement and dissipates energy in

the channels.

Compared with generic foam products, technical rubber materials made from recycled crumb are sustainable whilst remaining entirely recyclable.

They will also not rot or break down over time and their physical properties won't alter. Moreover, they experience minimal creep, even under high point loads. Assuming they are installed in accordance with manufacturer guidelines, they should last the lifetime of the building.

■ **Efficient installation:** Key to the acoustic performance of an under screed product is effective installation as the nature of the system makes it sensitive to workmanship.

Under screed materials should be unwound and left for a few hours, or ideally overnight, in the area where they are to be installed. This allows for any potential shrinkage before the material is measured and cut to size.

Rubber under screed products are

quickly fitted by turning up the material at the edges, with no need for separate perimeter strips. This reduces the potential for workmanship error, which can occur when the application of separate perimeter strips is required.

When using a recycled rubber granulate material, lay a damp proof membrane on top before pouring the screed.

The membrane helps maintain long term acoustic performance of the system by preventing the screed from penetrating the porous rubber.

Under screed materials offer a high performance, acoustic isolation solution to exceed the minimum requirements of Part E. However, the under screed system must be compatible with the structural floor and type of screed.

With systems available for all types of floor and screed, rubber-based under screed products provide a highly efficient, cost effective impact sound solution. **CFJ**