

Help and advice



Peter Grant on measuring damp

The Blue Peter way to verify your instruments

OVER the past seven months I have hopefully convinced you of the value of testing for moisture. There's nothing new in this advice and you'd be hard pushed to find any copy of **CFJ** over recent years without someone giving essentially the same message.

If you've been closely following this series you should be quite familiar by now with the various moisture standards and readings expected in the stages of subfloor preparation. You will hopefully be the proud owner of at least a basic moisture meter and own or have access to a floor hygrometer.

Great! But hang on a minute, how can you be sure that the readings you take are both correct (within acceptable tolerances) and also represent the stable and true picture of the moisture status, i.e. one likely to endure as a reasonably steady state post installation?

Well, if you do no more than simply use the instruments, then the truth is that you cannot be certain. 'But I've only just bought it,' I hear you cry.

It's a complex instrument and like anything man-made it can go wrong or give false readings, just like the LTI 20-20 laser speed gun so beloved of our boys in blue.

It has to be calibrated and checked before and after each tax collecting (sorry 'camera safety') session. If they're not, then those lawyers and private citizens in the know can challenge the veracity of the readings in court and the case will be dismissed if the relevant calibration records cannot be produced.

It's a high risk strategy of course which will mean you will end up with a bigger fine and costs should the speed gun operator have followed procedures to the letter.

There is a similar risk/reward analogy here in flooring. Most of the time jobs go without a hitch but once in a while something might happen after the installation which causes a moisture problem to damage the floor.

As the fitter, you will be the first to be called in to investigate. You feel supremely confident the problem is not down to you or the materials you used.

Why? Because you made the required checks to BS8201, 8203

and 5325 and your readings were all sub 75%, indeed most were below 70%. You checked the materials, sourced from trusted suppliers, carefully, and these were in line with manufacturer's specifications.

The customer is not happy and wants a level serviceable floor, the one they paid for. The plot thickens and the case 'goes legal'. Independent expert witness is called in and verifies that the subfloor is now indeed wet and returning ERH values well in excess of the benchmark 75%.

'But it was dry when I checked it prior to installation, in fact drier than one expects most of the time' you say. Ah, but what do your calibration checks indicate pre and post readings? 'I have not done them, it's a new instrument and still under warranty'.

So, have you wasted your time and money in making these

investments in instrumentation?

Well, if you do not check the calibrations on a regular basis then, yes, you might have! How complex a task is making these sanity checks? The good news is, not very.

Let me explain: New instrument under warranty or not, it is recommended that you verify the instrument's WME readings with a check device (normally supplied with the meter) and also its hygrometer functions (assuming it has this facility) either with a reference probe (which comes complete with a four point traceable calibration certificate) or a home spun 'Blue Peter' style check using a saturated salt (NaCl) solution which will return an ERH of 75% at 20degC.

(If you need further details of these methods, contact me directly 07885 221675 and/or

pgrant@tesco.net and I'll send you an information sheet detailing the procedures).

What about the 'stable and true' representation of conditions I referred to earlier. The answer here is the use of data loggers.

Now there was a time when this technology was just in the gift of consultants due to complexity and cost but things have moved on a pace in this arena and it is now quite affordable for most flooring professionals to arm themselves with these highly versatile instruments which help build a comprehensive picture not only of the subfloor but also the room environment.

I will continue this theme next month. See you then. **CFJ**

Peter Grant is technical sales manager at Martin Lishman.

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David Gatfield on floor preparation



Cheap and cheerful and you could get an earful

IN my opinion, it is impossible to over emphasise the importance of correct and thorough subfloor preparation. But never one to shy away from a challenge, I'll have a go.

For some, preparation can be the thinnest coat of cheap screed over whatever is left on the subfloor after removal of the old flooring.

Thankfully, to the majority of flooring contractors it's a necessary and crucially important part of the flooring process on which the longevity of the installation as a whole depends.

What's the point in laying a quality finished floor covering designed to last 10-15 years or longer on a millimetre of badly mixed smoothing compound that looks like it's been laid with a shovel?

To compound (excuse the pun) the situation, today's market demands floor coverings that are more and more decorative. Many vinyl products mimic natural materials such as marble or

timber and the effect is completely lost if the subfloor looks like the North Sea, or if every joint in the boards beneath clearly show through.

If a smoothing compound is to be used, getting the right one for the job is of course important, but just as important is the correct mixing ratio of powder to liquid, and applying it the manufacturers recommended thickness as all three greatly affect the hardness of the cured product.

Modern smoothing compounds include true self-levellers for anyone who's not such a dab hand with a trowel. In addition, manufacturers are queuing up to offer advice or visit site to help you get the best result from their products in the hope of securing more business.

Many customer complaints arise from the misuse of latex smoothing compounds. These can be difficult to trowel flat and it can take a bit longer to achieve a finish that won't make you seasick. These poor results are

difficult to defend and it's best to avoid them in the first place.

Latex screed can be finished to a high standard in several ways. Skill with a trowel is an obvious starting point and logically, the bigger the trowel, the fewer the marks in the finished job.

Allowing the screed to set for an hour or so before wetting the trowel with water and going back over the surface with a big sweeping action is another good tip. If you catch it right, you'll flatten the original trowel marks without leaving new ones.

Alternatively, a spiked roller passed through the wet screed not only prevents the formation of tiny craters as the screed dries, but also flattens trowel marks. This is best achieved by one man applying whilst another rolls, a method that has been used in the resin industry on self-flowing systems for many years with great success. Stoning down once the screed has hardened, though a little outdated, is also a tried and

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Help and advice


Martin Cummins on high temperature adhesives

Some like it hot, but that's not always cool

SUMMER is here and of course we're all holding out for a hot one, so should we all be running to grab those high-temperature adhesives to cope with the heat? Well the simple answer is not necessarily.

We need to consider first what an adhesive claimed as High Temperature (HT) really does. What does the term really mean?

During a recent training session this very question was raised.

Among those present, some believed that these are adhesives that can be applied when it is hot in the room; others thought that they are adhesives that should be used if a building is permanently warm; or that they are adhesives capable of performing whether it is warm or cool. In some respects all three views may be correct.

So there may be differences in what HT means depending upon the adhesive type, its area of use and the slant given to the product by the manufacturer.

If nothing else the name suggests a product with higher performance characteristics with regard to temperature.

We must therefore consider why there may be a need for higher performing products.

British Standards instruct what temperature ranges should not be exceeded (i.e. 27degC for vinyl floorcoverings) in service and also the temperatures limitations throughout installation.

With due respect to British Standards the nature of flooring is constantly changing, therefore the parameters products need to perform under, are continually being stretched.

A prime example is under floor heating. This has been around a while as warm water-pipe systems. These give a relatively controlled warming and cooling process on the floor whilst the floorcoverings and adhesives are not put under too much strain and perform well.

Nowadays though under floor heating can consist of radiant surface mats (traditionally used under ceramic tiles and referred to as under-tile heating) which, having as little as 3mm smoothing compound above them, can give quick temperature fluctuations putting the floorcoverings and adhesive under considerable strain.

Another such situation could be a conservatory or a glass fronted building. These areas are subject to high solar gain with extreme temperature fluctuations, particularly on a warm spring day or a cooling autumn afternoon.

The floorcovering of choice was typically stone which is relatively stable and used a strong bed of cementitious material and no problems are encountered.

However, the attraction of bespoke or design vinyl flooring creates a different situation. Here the adhesive is close to the surface, the vinyl heats up or cools down quickly with the external weather change and puts the system under pressure.

Of course not all floor covering give rise to such concern under temperature variance; for example, carpets and carpet tiles even when very warm will not put adhesives under severe strain and, provided the adhesive itself is stable in warmer temperatures the coverings will remain successfully adhered. The greater problem with these is generally found to be wet/dry variances.

However, hot pressed vinyl tiles (aka LVT) and rubber may not suffer great dimensional change with temperature variance, BUT they are extremely strong products and exert a great deal of strain on the adhesive line.

High strength and high Temperature tolerant adhesives are therefore required to ensure the flooring doesn't 'pop off'.

What about rooms which are constantly warm or constantly cool. What requirements are needed from adhesives in these situations?

In general the floorcoverings selected and products chosen should be stable at the temperature in use. A pressure sensitive adhesive may not perform particularly well at low temperature, but is good in warm temperatures whereas a good quality SBR adhesive tends to perform well warm or cold.

Historically, epoxy adhesives with extremely high strength and not affected by temperature to any great extent held the floor covering where it was placed.

The downside is that they are not particularly contractor friendly, being hard to use to use and

awkward to lay. They do still have a place, although more for moisture tolerance.

Options are much wider now as these epoxy's are joined by the high technology adhesives that bring a more 'engineered' solution for wide temperature tolerance.

With all the above in mind our [Laybond] HT adhesives are more about temperature tolerance – the ability to ensure the floorcovering performs under wide temperature fluctuations.

They are recommended in areas where traditionally Epoxy or PU adhesives were necessary. Other adhesives claimed as HT may be suitable over wide temperature fluctuations or may be products designed to be used in constantly warm environments (export grades) or simply be products that themselves are not affected by heat (but they may be unable to hold the floorcoverings should

they themselves be affected).

In summary: Be aware that the label high temperature may not be just about high temperature performance and the adhesive's ability to not break down.

It may refer to the adhesive's ability to tolerate wide temperature fluctuations and that doesn't necessarily mean from ambient to hot; equally it can mean where the base temperature is low moving to ambient.

Consider at the outset what conditions the floor will be subjected to and match the adhesive and its performance to ensure a successful installation. But as always, if you are in any doubt, consult the product data sheets or the manufacturer. **CFJ**

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tested method.

If none of the above take your fancy, Altro manufactures a resin compound for use under vinyl flooring that dries completely matt with obvious advantages. This makes apparently good screeders, even from those whose work looks like they used the bucket to lay the screed rather than the trowel.

Another important factor which is sometimes out of the flooring contractors control due to time constraints, is how to allow sufficient curing time for the smoothing compound before the floor covering is installed.

Generally speaking, in reasonable drying conditions most smoothing compounds will take light foot traffic after a few hours and will allow the installation of floor coverings a few hours after that. But problems can still occur if the finished floor is heavily trafficked before the smoothing compound has had time to fully cure.

Even though the flooring has

been laid, the smoothing compound may still be susceptible to indentation from heavy trolleys or machinery manoeuvred into position on small wheeled trucks.

Not to mention the damage that chair legs can inflict, particularly when only two of the four are in contact beneath a ten stone sixth-former rocking back and forth on the newly installed floor covering.

And we've all heard the startling statistic that an eight stone woman in stilettos exerts a downward pressure of several tons per square inch on the 2mm of plastic you've just finished laying and are still awaiting payment for.

There's much more to correct and effective subfloor preparation than we've had time or space to cover today, but I'm sure it's an issue that we'll cover time and time again. **CFJ**

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