Help and advice

Alec Stacey on finishing

The best advice is to opt for a whole-in-one

FINISHING a timber floor should be a straightfor ward business, the floor is installed and the tr eatment selected and applied.

However, when a problem arises, par ticularly in commer cial situations, the r emedial treatment inevitably involves costly r e-sanding of the whole floor befor e re-treatment.

When we produce specifications for architects, specifiers or even DIY users, we always include a maintenance regime which will not only preser ve the quality of the finish but will render refurbishment less pr oblematic.

However, the first and usually overriding factor of a specification will be the desired appearance and this will in part determine the choice of finish. Traditional oil finishes pr oduce a warm, matt look, whilst lacquer tr eatments can produce shinier sur faces.

From a practical perspective traditional oil treatments r equire more maintenance in higher traf fic areas, while in homes their use is best restricted to low traf fic areas such as lounges and bedr ooms.

As the appearance of floors in kitchens and hallways often deteriorates due to the client's lack of maintenance knowledge, a lacquer treatment is often a better approach for these ar eas when all that will be required is simple damp cleaning combined with regular sweeping and vacuuming.

In high traffic commercial areas however there are benefits from traditional oil finishes as, although the floors will deteriorate, they can be maintained and restored with minimal disturbance. Repairs can also be per formed locally of fering benefits in busy public buildings.

At Heathrow, over a 24 hour period, only six hours ar e available to clean and refurbish the flooring – an obvious problem if lacquer needs to dr y and cure suf ficiently to per form well.

In commercial areas a lacquer specification must maximise durability and this is achieved by the characteristics of the particular product and the number of coats applied. An impor tant concern here is the coverage rate which, if extended, will r esult in the film 'build' from each coat being reduced, resulting in impaired performance.

In the majority of cases a primer should be used and failur e to do so essentially wastes the first lacquer coat applied to the bar e wood as most soaks into the timber producing little 'build'.

Sometimes the floor seal will wear prematurely when applied to highly textured timber. Often this is a result of skipping necessar y abrasive grit sizes or by finishing the timber with over-course abrasives.

This leads to the initial application of a water-based finish causing 'grainraising' which undermines the required film build from initial lacquer coats. In or der to reduce this, the primer coat should be abraded to achieve the smoothest possible sur face prior to lacquer application.

In high traffic areas, maintenance levels ar e an important factor and it's impor tant that clients understand that most damage to timber floors is caused by abrasive par ticles traf ficked onto the floor from outside.

This can be minimised by the installation of ef fective barrier matting and by implementing a maintenance regime which cleans the floor but also allows the futur e re-application of lacquer coats.

This is achieved by using a refresher maintainer, such as Bona Freshen Up.

This type of polyur ethane product restores a sur face which has become dull thr ough wear and also adds fur ther protection to the floor seal.

If coats of lacquer ar e required these can be applied without sanding the floor back to bar e timber. This is a useful appr oach for museums and galleries wher e closur e, disr uption and dust from sanding all cause pr oblems.

In summar y, specifications should take a holistic view of the timber floor's life, rather than just the selection of a pr oduct. Details regarding the preparation of the floor should be included; for instance we r ecommend that in the majority of cases the final belt and edge sanding of the floor is made with 120 grit abrasives, followed by finishing sanding to produce a smooth homogenous sur face.

A primer coat should be applied, and then abraded when dry. The appropriate number of lacquer coats should be stated with the correct coverage rates. Instr uctions for the immediate aftercare of the floor are also impor tant in addition to the implementation of an ef fective maintenance regime once the sur face has fully cured. CFJ

Alec Stacey is the technical manager at BonaKemi

Further information on
T: 01908 399754

David Gatfield on a guide to adhesive use

Don't hang about when using 2-par t adhesives

THE summer has finally ar rived and, as you r ead this, I hope you are enjoying some glorious sunshine, rather than the wash out of last year.

Warmer weather also leads to flood of questions and queries about two-par t adhesives.

We recently got a call from a contractor in Manchester who was using the two-par t system for the first time, installing thin r ubber sheet onto our Everlay system, using an epoxy adhesive.

After fitting the sheet dr y, he went to his van to get the adhesive.

As the van had been sitting in the sun all mor ning, the two-part adhesive was mixed and had fir med up in the container, making it unusable.

Another contractor in Nor th Wales was installing safety flooring in the conser vatory of a residential home for the elderly. He was using a two-par t polyurethane adhesive, which in many ways is mor e forgiving than a straight epoxy adhesive as under normal circumstances the cur e is much slower.

He'd fitted the sheets of flooring, mixed and spr ead the adhesive and laid the flooring back down, then went for lunch.

When he got back he found hundreds of blisters in the flooring, which reappeared as fast as he pushed them out.

The blistering was caused by a number of issues – the subfloor was war m to the touch and the air temperature was too high, making the floor too soft and an escape route for excess adhesive.

So in view of these pr oblems, I thought I'd write a brief guide for the use of two-par t adhesives, whatever the weather:

- Never leave two-part adhesive in hot cars or vans.
- Never mix two-part adhesives until you ar e absolutely r eady to get on your knees and star t spreading.
- Get the adhesive out of the container and on to the floor as quickly as possible – this pr olongs the curing time.
- Unless working with floor coverings which have honeycombed or recessed backing, never use a new trowel blade.
- Use smaller units as these mix mor e easily, and

Continued on page 30

Martin Cummins on dampness in subfloors

See a subfloor as wet, unless it's proven dry

IT'S coming up for mid-summer and it's hot. The cold, damp winter days are a distant memory. And of course with all this heat the screeds are all lovely and dry.

The idea that a floor might need a membrane is pretty much inconceivable to many contractors – the floor looks dry, it feels dry, doors are open giving good ventilation – everything you could need so is it worth even testing the floors? Yes, yes and once more yes!

The trouble we have is that the appearance of a screed surface tells us little about what is below and a dry surface does not tell us the screed or concrete is dry.

One of the facilities we at Laybond offer is to test the subfloor on behalf of the main or flooring contractor.

Typically we turn up on site to test the floor and pretty much each time we are met with suspicion and caution with the main contractor under the mistaken belief that we are there to con him by telling him his floors are wet and as a result the flooring contractor is going to charge him for using a membrane and consequently the cost of the project from the flooring side has gone up.

They simply don't believe us when we tell them the floor is wet.

I recently visited a site to be met by the main contractor who, like described above, assumed I was there only to tell him his subfloor was wet. Well firstly, it isn't my opinion, it is the opinion of the instrumentation – the Hygrometer – and that is what determines the moisture level.

Unless British Standards change it is the only way a flooring contractor can say he's done his job properly. The particular floor was 150mm power float concrete, which had been down for five months or 150 days.

The contractor, applying the 1mm per day, accepted drying time for a screed, assumed that 150 days should surely be sufficient time to dry 150mm? But this figure of 1mm per day is accepted only for screeds laid up to 50mm; for thicknesses greater than 50mm this 1mm per day drying is no longer accurate.

Looking at the construction as a whole it also became apparent that the roof had only been put on some two months previous and up to this point the floor had been clearly exposed to the elements and whatever that may have meant in terms or rain and moisture.

> ***'Typically we turn up on site to test the floor and we are met with suspicion and caution with the main contractor under the mistaken belief that we are there to con him by telling him his floors are wet and as a result the flooring contractor will charge him for using a membrane and consequently the cost of the project from the flooring side has gone up'***

The floor was polished like a sheet of glass, black and in a dark room with little air flow or ventilation.

I immediately suspected 95% RH and of course testing confirmed this. Of course I then got into discussion about not using the DPM as the main contractor has not priced for it in the job and they were certainly not got to use one where the floor covering was to be carpet (it is breathable so the moisture will get through was the argument).

Dampness in screeds can be very problematic even to carpet areas; mould growth can occur, shrinkage of the carpets upon drying out again can be a problem and even some of the adhesives that may be used to bond the carpet will come under scrutiny and can fail to hold the carpets.

Why was the floor still wet? Well, it is not often understood that the accepted 1mm per day drying time is only for screeds up to 50mm.

Additionally screeds are relatively open in texture which allows the moisture to escape much quicker than a floated concrete.

Although sand, cements and aggregates are used in concrete the nature of power floating concrete creates all sort of issues with regard to drying out.

The compaction of the surface and the additional depth of material (typically 150mm plus) mean that the moisture cannot get out of the system at the same rate as pre a 50mm sand/cement screed.

Moisture is not so easily released and certainly not at 1mm per day. In fact for this thickness, drying can be anything up to a year.

Of course weather, temperature, the use of dehumidifiers, the amount of ventilation and room air flow can all influence this, but the cost of dehumidifiers for example would need to be included in the original project cost.

For new build, floors should not be considered dry and should be considered wet until proven otherwise.

In more instances than not, the floor will be above the 75%RH moisture level and will need a surface DPM, even where carpets are to be laid.

The hygrometer test is really to find that rare occasion when the floor might actually be dry. This does beg the question why membranes are therefore not built into the price in the first place?

There is no conspiracy – neither the manufacturer nor the flooring contractor is trying to sell a membrane for the sake of it, they specify one because the floor is wet and needs one.

In summary, we are telling you that in new build projects, in most cases, all cementitious subfloors the floor will need a membrane.

Hopefully the day will arrive when flooring contractors start from the position that the floor will need a membrane, even if the main contractor starts from the position that it doesn't.

These days with one-coat membranes down time can be as little as six hours, so its application is not an issue.

Of course we will continually advise main contractors, designers and architects of the significance of moisture and the need to protect floorcoverings, adhesives and smoothing compounds and, looking into my crystal ball, they to will learn to consider subfloors wet unless proven otherwise (an eternal optimist!!)

Price in a membrane – don't take risks – even with carpet.

When main contractors learn to accept this from the off, on those occasions when you don't need a membrane, everybody will be happy! CFJ

Martin Cummins is Laybond's technical advisor

Further information on
T: 01244 674774

David Gatfield on 2-part adhesives

Don't hang about!

Continued from page 28

are quicker to use up keeping the adhesive fresher and more fluid.

- Always push or roll out all air pockets immediately, whilst the adhesive is wet.
- Never leave site until the flooring has laid flat and blister free in the adhesive for at least two hours.
- Never leave a blistered floor overnight to see if it will settle down - it won't!

We Brits are supposedly prone to lack of preparation before heading into the sun. The number of people I see with pink faces and sunburnt arms after a good weekend, suggests this is probably true.

As it gets (hopefully) warmer, remember it is not just about getting yourself ready for the sun, think of your tools too – or your summer could be sticky for all the wrong reasons. CFJ

David Gatfield is Altro's northern region technical services manager

Further information on
T: 01462 489405