

Wet Floor Problems

Whether a refurbishment or new floor, wet floor problems are increasingly becoming a major cost to both builders and insurers.

Floor failures are unfortunately increasing with growth only matched by insurers refusing claims for failed floors.

Many problems are apparent but they almost always revolve around excess moisture.

New Build Problems

Concrete

The use of concrete for floors has always recognised the need to establish the moisture content of the screed should be below 75% prior to the installation of resilient or (non permeable flooring). The British Standard designed and paid for by Protimeter was a useful standard which unfortunately is flawed in many of today's measurement or construction requirements.

Basically the standard BS 8201, 8203 and 5325 measures the amount of moisture evaporating through the surface and is collected in a known area for measurement. That's fine if there are no vapour retarders such as laitance or release agents. Obviously the presence of retarders is not a vapour barrier but can be seen to simply reduce evaporation thereby causing a massive failure in accuracy over a time period.

Speed drying is another problem which subject to use after chemical reaction can dry concrete or screed quickly, sometimes faster than capillary action can replace the evaporation and thereby create a false reading which may result in new wetting after the drying certificate has been issued.

Wood Floors

Laminates and especially cheap laminates are extremely moisture sensitive and this vulnerability can be exasperated by incorrect installation. Installation failures include vapour barrier issues, expansion problems and often cold bridging.

Vinyl Floors

Vinyl flooring is usually installed for its aesthetic, wear and vapour barrier characteristics. Unfortunately the edges of the vinyl flooring, is a major failure point where the trapped moisture will escape. This can be at room edges, especially where plasterboard walls or plaster touch the floor, also stud walls where vinyl covers either side the cavity becomes a moisture reservoir and mould, and odour is likely to develop.

Moisture content and Equilibrium

The biggest cause of floor failure is invariably the false negative readings in terms of moisture content. The moisture content must be measured three dimensionally and reflect the environmental equilibrium or potential equilibrium. While this may be seen as a judgement call it should be a measured factor removing the historic approach of flooring contractors of "Experience" The use of new drying techniques, insulation and chemical additives and indeed power floated applications now dictate accurate measurement prior to any installation.

Insulated floors

The installation of insulation between the floor slab and screed was hailed as innovative until it gets wet. Drying the slab through the insulation was originally impossible and builders generally advised that the floor would eventually dry out. Some hope, when your installing a vulnerable laminate or sensitive floor which can include vinyl. Pressure drying systems can be employed although adequate exhaust venting is essential if blown screed is to be avoided. Vacuum drying from below is an alternative but whatever system is used accurate measurement is essential.

About the author

Jeff Charlton is principle consultant with Building Forensics and can be contacted on 08700 789 999 email tech@999team.org or see the web site www.buildingforensics.co.uk