
VAPOUR BARRIERS & DPMs

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The difference between Vapour barriers and Damp-Proof Membranes (DPMs)

Vapour barriers

With solid subfloors such as concrete, screeds etc. a certain amount of residual moisture can be retained in the subfloor after construction and this can cause damage to a laminate or wood floor installed on top whilst the subfloor/screed is drying out or achieving equilibrium.

Consequently, a water vapour control layer in the form of a film is recommended for use as a general principle – this advice is contained in the European Producers of Laminate Flooring (EPLF) Technical bulletin 08/2013.

Films which act as a water vapour control layer can be separate sheets or can be incorporated into the underlay.

In EPLF Technical bulletin 08/2013, BS EN 12086 is the standard defined for expressing the capacity to impede the diffusion of vapour.

The full title of BS EN 12086 is Thermal insulating products for building applications – Determination of water vapour transmission properties, and the standard is part of a series of standards mainly referred to in roofing and building insulation materials.

Within this standard the capacity to impede the diffusion of water vapour is expressed as the Sd value, and the EPLF – using “practical experience” – have stated that the SD value should be at least 75m. They make further comment stating that PE films with a thickness of 150 microns or more or PET films with a thickness of 10 microns or more generally make this requirement.

The test method within BS EN 12086 requires that the test specimen is sealed to the open side of a test dish containing a desiccant. This assembly is then placed in chamber where the temperature and humidity are controlled. There is controlled difference between the partial water vapour pressures in the test assembly and in the test atmosphere and so water vapour flows through the test specimen.

The assembly is periodically weighed to determine the rate of vapour transmission up until a steady state is reached.

The SD value is a way of expressing the materials reluctance to let water vapour pass through as an equivalent air layer thickness, measured in meters.

So, the EPLF requirement is an equivalent air layer thickness of 75 meters.

Damp proof membranes

A damp-proof membrane is either laid below or above the concrete slab and is designed to inhibit moisture from the ground below.

The UK Building Regulations 2010, Approved Document C, Site Preparation and resistance to contaminants and moisture, states that a membrane should be at least 300 microns thick (1200 gauge).

BS EN 13967: 2004 is the standard for plastic and rubber damp proof membranes. Its full title is ‘Flexible sheets for waterproofing. Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet. Definitions and characteristics.’

A standard DPM to BS EN 13967: 2004 is used on all concrete slabs which may be subject to the capillary rise of moisture, Where the slab may be subject to hydrostatic pressure, suitable tanking membranes are used.



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