

Testing of Laminate Underlays and Floor Systems in accordance with CEN/TS 16354

Underlays are integral elements of an overall floor system. They permit floating installation and are intended to protect the floor over a longer period of use. The demands arising from this purpose can be categorised according to the aspects design/subfloor, usability and acoustic properties.

CEN/TS 16354 defines test methods for determination of the relevant technical parameters of underlays. This technical specification was published at the end of 2013 and is the outcome of discussion in various working groups at European level and within the EPLF. The demands to be met by underlay materials are specified in the corresponding EPLF and MMFA technical bulletin.

Design/construction demands

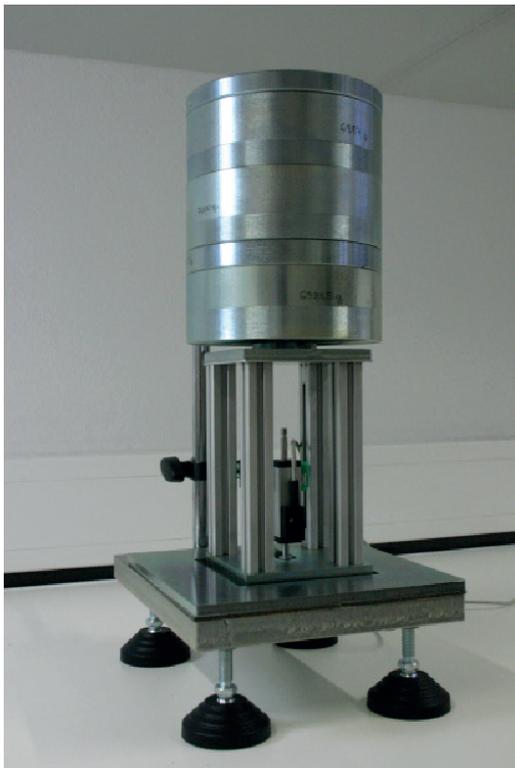
One of the important design demands is thermal resistance (R). Different demand profiles exist for flooring with and without underfloor heating or cooling systems. Where such systems are present, the functioning of the heating or cooling system is placed in the foreground. Otherwise, comfort is the principal concern. Further demands in this category refer to the compensation of localised unevenness (PC) and protection against substrate dampness (SD).

Usability demands

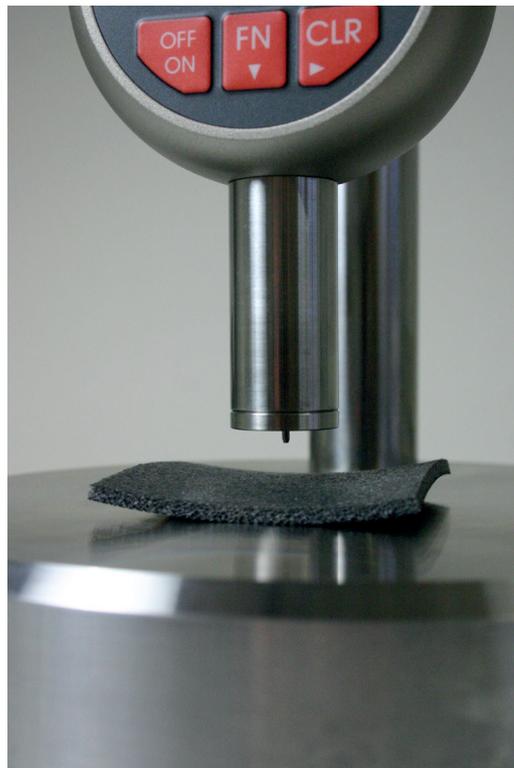
Floor systems are subjected to heavy loads in use. The underlay, too, must withstand these loads over the whole period of use of the floor system. A distinction is made between temporary static loads (CS), dynamic loads (DL), e.g. from persons walking on the floor, and sustained static loads (CC), e.g. from furniture. Resistance to dropped objects (RLB) must also be guaranteed.

Acoustic demands

Walking persons and other use of a room generates a certain level of noise, which – especially in the case of floor coverings with a hard surface – may be perceived very specifically. This noise (physically correct: sound) is termed walking sound (RWS) when it is perceived in the same room, or else as impact sound (IS) in adjoining rooms. The intensity and quality of the noise are decisive in determining whether it is perceived as agreeable, tolerable or disturbing. The lower the RWS and the higher the IS values, the more agreeable the general perception. Walking sound can be tested according to IHD-W 431, for example. Impact sound is determined in accordance with DIN EN ISO 10104-3, in conjunction with DIN EN ISO 717-2.



Test stand for determination of the resistance to sustained loads



Testing of the compensation of localised unevenness

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