

# Climate tests for wood, laminate and textile floor coverings

During practical use, flooring undergo climate changes that maybe differ by region. Thus, high relative humidity acts during summer whereas in the wintertime dry climates predominates reinforced by heating. These climatic alternations lead to dimensional changes in length and cross directions and may cause convex and concave deformations of the panels and, respectively, to the openings of joints. The tensions caused by dimensional changing can result in delaminations of the top layer or individual construction layers. It is therefore important to predict the behaviour of floorings under climatic changes. We offer you a realistic testing of floorings at changing climates with test areas of 3 m x 2 m in connection with your development process. As the result, damage prognosis can be deduced together with statements concerning the influence of systems construction or the moisture content of individual layers of the flooring.

## Testing of laminate and textile floor coverings

The testing of these floorings will be carried out according to ISO 24339:2006. The following climates will be realised:

- 1 week at 23°C, 50 % rel. humidity
- 4 weeks at 23°C, 85 % rel. humidity
- 4 weeks at 23°C, 30 % rel. humidity

Besides dimensional changes, openings of joints and height differences (each length and cross) also the evenness over panel width and possible damages will be detected according to a defined measurement and assessment scheme.

Requirements:

- according to EN 13329, class 34
- according to ISO DIS 14486, class 34
- according to EN 16511, class 34

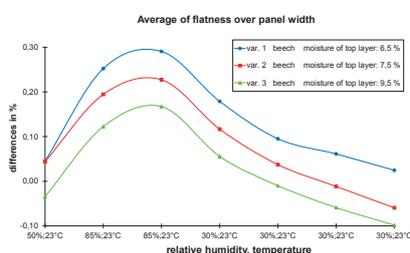
## Testing of wood floorings

At these floorings coated with systems that are more open for water vapour diffusion and thus more sensible for climate influences the following cycle is proved:

- 1 week at 23°C, 50 % rel. humidity
- 2 weeks at 23°C, 85 % rel. humidity
- 4 weeks at 29°C, 20 % rel. humidity

On wood floorings or their systems the above named parameters can be determined as well. Requirements according to IHD-requirement profile:

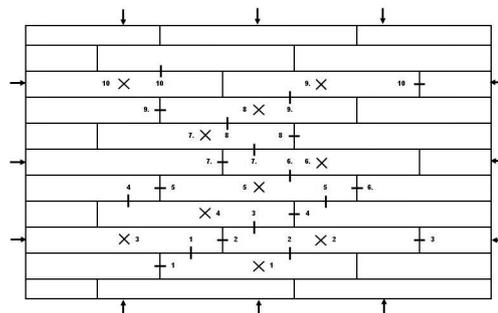
- openings short side  $\leq 0,20$  mm
- openings long side  $\leq 0,50$  mm
- flatness over panel width max.  $\leq 0,35$  %
- flatness over panel width min.  $\geq -0,35$  %



Example of the influence of the top layer moisture content of a multi layer parquet on the evenness



Testing rack of IHD with measuring bridge (test area 3 m x 2 m)



Measurement scheme



Upbulging at multilayer parquet in wet climate



Delamination between layers of a flooring construction

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