

In order to assess the quality of Kaindl Laminate and Real Wood Flooring more than 20 extensive tests are carried out to determine the quality of the surface and functional properties. The most important of these tests are outlined below.

Behaviour on Exposure to Abrasive Stress (according to EN 438-2/6):

Rotating discs fitted with abrasive paper are pressed against the rotating surface of the test flooring at a defined pressure. Immediately upon the decorative layer showing signs of damage the number of revolutions which the test flooring has completed up until that point is recorded as the Initial Point (IP). The abrasive stress is then reapplied until the decorative layer is 95% destroyed. The number of revolutions which the test flooring has passed through up until this point is then recorded as the Final Point (FP). The mean value of these two readings is then taken as the AT Value. (→ Kaindl Info 14: Abrasion).

Behaviour on Exposure to Impact Stress (according to EN 438-2/11):

A steel ball of defined size and weight (dia. 42.8 mm 324 g) is allowed to fall onto the test flooring from a defined height. The point of impact is then examined for any damage under a magnifying glass with magnification X6. Damage may manifest itself in the form of hair cracks, penetrating cracks, or chipping of the decorative surface. The impact stress is measured in Newton (N).

Behaviour on Exposure to Scratching Stress (according to EN 438-2/14):

A diamond tip exerting a weight force of 5.0 N is allowed to run in a concentric circle on a rotary plate with a fixed number of revolutions over the test sample. The test sample is then examined for possible damage to its surface. In the event of there being a closed circular marking of the surface the test is repeated time and again until there is no marking of the surface whereby each repeat is run with a 2 mm diameter difference from the previous run and with 0.5 N less weight force. In the event of the weight force of 5.0 N failing to cause any visible damage the weight is increased in 0.5 N steps until a closed circular marking is produced.

Sensitivity to Staining (according to EN 438-2/15):

Various substances encountered in everyday life (such as acetone, coffee, nail varnish, lipstick, ballpen ink, shoe polish) are applied to the test material for a fixed contact [period. At the end of this contact period the test material is washed then examined for surface damage.

Light fastness (according to EN 438-2/16):

A portion of the test sample together with a Blue Scale is exposed to the light of a xenon arc lamp for a prescribed radiation dosage. The said dosage is determined by the extent to which the Blue Scale fades. A subsequent comparison of the unexposed portion of the test sample with the portion which was exposed enables assessment of the light fastness of the test sample.

Behaviour on Exposure to Glowing Cigarette Ends (according to EN 438-2/18):

Three cigarettes, each of which represents a different internationally-sold brand, are lit and smoked for the first 10 mm or so before being placed full-length on the test sample. The test sample itself must be in a draft-free environment. Each of the glowing cigarettes is left lying on the test sample until a further 20 mm of its length has burned away. The cigarette and its burnt remains are then removed and the surface of the test sample is examined for any damage (cracks, blisters) and discoloration (yellowing, brown discoloration).

Formaldehyde Emission (according to EN 717-2):

For the purposes of the gas analysis a test sample with known surface area is introduced into an enclosed chamber inside which the relative humidity, temperature, pressure, and air circulation are defined. In compliance with the Norm, the cut edges of the test sample are sealed with aluminium adhesive tape. The formaldehyde emitted will be mixed with the atmosphere inside the chamber and then conducted into water-filled gas washing bottles which will absorb the emitted formaldehyde. The formaldehyde concentration in the water is then determined and expressed in units of mg/hm² (milligrams per square metre per hour).

Stressing with Metal-Spike-Heeled Shoes:

A metal test stamp of 6 mm diameter ($= 28.25 \text{ mm}^2$) is applied to the test sample with increasing pressure (up to 600 N) for a duration of 1 minute per test. During this period the test stamp is also turned through a quarter circle with the object of simulating the treading action and turning movement of a foot. This test is repeated several times on different parts of the test sample (with each repetition at least 20 mm distant from the others). The test sample is then examined for any damage. Damage in this test would comprise hair cracks, penetrating cracks, or chipping of the decorative layer.

Capacity to Tolerate Chair Castors (according to DIN 54324):

Two chair castors, each stressed with a weight of 30 kg, are made to run in circular patterns over the test sample – which is fixed to a round table and also made to revolve at the speed of 12 revolutions per minute and the direction of rotation reversed every 30 minutes. The total test length travelled by the castors is 100,000 metres (100 km). The test sample is then examined for any damage and the castors are checked for possible functional impairments. Even a change in shade on the part of the test sample is to be regarded as damage.

Anti-Skid Properties (according to DIN 68131):

A square-shaped, 30-kg-heavy test weight with a dry shoe-sole leather friction contact is placed upon the horizontal test sample and drawn across its surface horizontally at a fixed speed. The traction force necessary is determined. The coefficient of friction is obtained from the calculation traction force / test weight force.

Combustibility (according to ÖNORM B 3810):

The test sample is classified into combustibility categories in accordance with the given guide-lines. The highest – and best – rating is B1 (flame-resistant).

Dense Smoke Formation (according to ÖNORM B 3800/1):

The test sample is classified into dense-smoke-forming categories in accordance with the given guide-lines. The highest – and best – rating is Q1 (faint smoke formation)

Thermoconductivity (according to DIN 52612/1):

A defined quantity of thermal energy is passed through the test sample. The thermoconductivity is determined on the basis of the mean temperature difference. The unit of expression is $1/\text{Lambda} (10^\circ\text{C}) [\text{m}^2 \text{ K/W}]$.

The recommendations and information given in this Product Sheet are to the best of our knowledge in keeping with the present state of the art. However, they are intended purely for information purposes and as noncommittal guide-lines. As such they cannot constitute grounds for any claim under warranty.