Laminate flooring guide

The unique product of laminate flooring
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**Abrasions**

Abrasion is understood as being the wear of the abrasion layer. With complete wear of the abrasion layer, the decorative layer is affected and destroyed. EGGER laminate flooring features high abrasion resistance. In accordance with their classification, we guarantee abrasion resistance in private living areas of between 7 and 30 years for our laminate flooring.

**Accessories**

EGGER offers an extensive accessory programme to meet your needs. Among other products, you will find skirtings, profiles, elastic joint compound, cleaner, repair kits and highlights such as in-floor LED lighting for your individual flooring.

**Allergies**

An allergy is the state of an acquired hypersensitivity of the organism towards a substance regarded as being foreign to the body (allergen). Due to the sealed surface structure and the simple and efficient cleaning methods, laminate flooring is particularly suitable for individuals suffering from allergies. Dust mites and other allergy causing organisms cannot survive on properly cleaned laminate flooring, and therefore cannot trigger an allergy. Naturally, this is important for individuals suffering from asthma or dust allergies.

**Ambient sound**

Ambient sound refers to the sound that occurs and is perceived when walking on laminate flooring in a room. EGGER offers special Silenzio products which make a significant contribution towards sound reduction (also see “Impact sound”). By using EGGER Silenzio impact sound underlay, both ambient sound and impact sound are significantly reduced.

**Antistatic**

When a person accumulates a static charge, a discharge of electricity may be felt upon contact with metal. It is completely normal for a person to accumulate a static charge. If a static charge cannot escape from the body before building up to a certain level, a so-called “electric shock” is felt when touching a metal object. The sensation may arise with static charges of more than 2 kV (kilovolt). A static charge cannot escape from the body if the ambient relative humidity is below 40 % or when the individual is wearing shoes with electrically insulating soles.

Under normal climatic room conditions, a static charging of an individual of above 2 kV is not to be expected with laminate flooring. Only laminate flooring that has been tested, certified and is labelled according to EN 1815 is considered antistatic within the corresponding standards. Conducting flooring is always required in those cases where the rooms have special requirements. Included are data processing facilities, control centres, operating rooms, intensive care units and areas with potentially explosive atmospheres. In these cases a special installation of suitable flooring is implemented and connected to the building potential equalisation system (earthing) by a qualified electrician. Due to the physical properties of wood-based materials, it is not possible to install laminate floors with derivation ability.
**Aqua⁺**

EGGER laminate flooring with Aqua⁺ Technology is approved for installation in bathrooms (see “Moisture-prone areas” for more information) thanks to the specially absorbent coreboard. For installation in moisture-prone areas, the EGGER system design must be used.

Coordinated Aqua⁺ System for applications in moisture-prone areas:
- Aqua⁺ comfort vapour barrier lining
- Aqua⁺ spacer and sealing band
- waterproof plastic profile (foamed PVC) with matching decor and sealing lip (optional)
- moisture-resistant Aqua⁺ Clic Sealer

*only for an overlaid clean-off zone in a commercial entrance area*

**Bathroom**

The Aqua⁺ product line is suitable/approved for installation in bathrooms; the following applies to all other EGGER laminate flooring products: EGGER laminate flooring is not suitable for installation in moisture-prone areas or areas with splashed water, such as bathrooms or saunas. EGGER laminate flooring in suitable for installation in private kitchens (see Kitchens).

**Blauer Engel (blue angel)**

The Blauer Engel (blue angel) is the first and oldest environmental symbol for products and services in the world. All EGGER laminate flooring collections have earned the well-known Blauer Engel (blue angel) environmental badge.

What this means for EGGER laminate flooring:
- Produced from mostly renewable raw materials
- Environmentally friendly production
- Materials that do not present a health hazard
- No hazardous substances to interfere with recycling

**Bonding**

Fully bonding EGGER laminate flooring to the sub floor is only possible and permitted in specially designated collections, and if the corresponding processing instructions are followed exactly. The following applies to all other EGGER laminate flooring products: The bonding of EGGER laminate flooring to the sub floor is not possible (e.g. Silenzio systems) and not recommended.
Building authority approval
In addition to the CE marking, laminate flooring currently also requires general building authority approval for use in habitable rooms in Germany. This is based on the DIBt principles for evaluating the health effects of construction products. Building authority approval is issued by the Deutsches Institut für Bautechnik (DIBt) in Berlin. Building authority approval has been issued for EGGER laminate flooring.

Care products
A suitable care product does not build up any layers and does not aggressively penetrate into the edge areas, which could cause swelling. The system-specific EGGER Clean-it laminate cleaner was especially developed for this purpose. It is available as part of our accessories programme. Using unsuitable cleaning agents can cause layers to form, which over time build up on the laminate flooring like a film on the surface.

Carpet Flooring / textile floor coverings
Textile floor coverings do not constitute a suitable sub floor and must be removed prior to the installation of laminate flooring. The reasons for this are:
1. Hygiene (the carpet may rot below the laminate flooring).
2. Compressive strength of the carpet (due to an insufficient pressure-stability underlay, high and above-average forces are exerted on the click connection during use, which may break as a result of material fatigue).
3. Production-technology direction (a “floating” floor installation may move in the running direction).

CE Certification
The CE marking is based on the European EN 14041 standard and ensures that the product properties correspond to the requirements regarding health, safety and energy conservation.

Classes of use
Quality category and qualification according to the European EN 13329 standard for DPL and EN 15468 for PDL (EGGER DPR). Used to identify the area of application for laminate flooring. All EGGER laminate flooring is produced and classified accordingly. Differentiation between “residential” and “commercial” with moderate, normal and heavy use. For improved identification, the classifications are represented by pictograms:
CLASSIFICATION OVERVIEW

Products are assigned to class depends on the following criteria:

- Abrasion resistance
- Shock resistance
- Resistance to stains
- Resistance to glowing cigarettes
- Behaviour when sliding a furniture leg
- Chair roller compatibility
- Swelling behaviour

<table>
<thead>
<tr>
<th>Stress class</th>
<th>Symbol</th>
<th>Description</th>
<th>Sample Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential – moderate</td>
<td>![symbol]</td>
<td>part-time use</td>
<td>Bedroom, guestroom</td>
</tr>
<tr>
<td>Residential – normal</td>
<td>![symbol]</td>
<td>normal use</td>
<td>Living room, dining room, hallways and corridors</td>
</tr>
<tr>
<td>Residential – high</td>
<td>![symbol]</td>
<td>Intensive, increased use</td>
<td>Entrance areas, kitchens and living areas</td>
</tr>
<tr>
<td>Commercial – moderate</td>
<td>![symbol]</td>
<td>Part-time use</td>
<td>Hotel rooms, conference facilities, small offices</td>
</tr>
<tr>
<td>Commercial – normal</td>
<td>![symbol]</td>
<td>Normal use</td>
<td>Offices, waiting rooms, boutiques</td>
</tr>
<tr>
<td>Commercial – heavy</td>
<td>![symbol]</td>
<td>Intensive, increased use</td>
<td>Open-plan offices, stores, multi-purpose halls</td>
</tr>
</tbody>
</table>

Cleaning

The sealed surface of laminate flooring allows problem-free cleaning. The flooring can be cleaned daily using a vacuum cleaner or damp mop. During cleaning, care should be taken that no moisture remains on the surface. Please see our cleaning instructions for further information! It is possible to clean products in the Aqua+ range using steam cleaners and industrial cleaners.

Clic profile

EGGER uses two different CLIC systems (product-dependent): EGGER UNI fit! and EGGER JUST clic! In both systems, the CLIC profiles are joined together without using any tools, the elements are held together without any glue, due to their patented profile construction (positive fit). It is therefore possible to uninstall the flooring without causing any damage, remove any damaged elements and reinstall the flooring, if necessary.

Conservatory

The installation of EGGER laminate flooring in a conservatory is possible if the room in question has a normal residential climate. Ideally the relative humidity is 50-60 % and severe temperature fluctuations are avoided.
**Damages**

Even in the case of a resistant floor covering such as laminate, use can lead to wear marks. So-called wear marks should therefore be seen as normal and typical to a certain extent. Small damage to the surface can be repaired or removed with the system-relevant EGGER repair paste DECOR MIX & FILL light and dark. Heavily damaged parts can be replaced.

**Direct printed flooring**

**PDL = EGGER DPR – Direct Print Technology**

In contrast with laminate flooring products that are produced using DPL technology, for products using EGGER DPR production technology, the decor is applied directly to the coreboard. In this production, we use water-based colour components that are almost completely solvent-free. The surface is protected by a multilayer, transparent UV-hardened paint system.

**Disposal**

Laminate flooring is classified as ecologically harmless household waste, which means it can be disposed of in landfills or incineration plants. Waste code for fabricators: 170201, waste code for end consumers 200138 (sorted) or 200307 (bulky waste).

**Distortions**

Distortion and buckling occurs when the laminate flooring elements are not sufficiently acclimatised prior to installation (not adapted to the ambient climate). Alternatively, the installed laminate flooring is not sufficiently protected against rising underground moisture. (see: Moisture barrier)

**DPL – Direct Pressure Laminate**

With these products, a decor paper and an overlay are pressed directly onto the carrier material. Corresponding balancer papers are applied to the back. Papers impregnated with resin are pressed onto the coreboard in a single-stage process. These so-called semi-format boards are cut to plank size after a cooling phase.

**Ecology**

In addition to the positive application characteristics, laminate flooring also has an ecological profile which identifies it as being ecologically friendly and medically compatible. EGGER laminate flooring contains more than 90% of the natural raw material wood. Laminate flooring is produced in highly modern production plants, which are subject to the most stringent emission and environmental protection requirements, and which have their own energy and heat recycling systems.
### Environmental Product Declaration

**EPD (environmental product declaration)**

An environmental product declaration according to ISO 14025 describes the environmental performance of the respective construction products. In addition to a comprehensive description of the manufacturing processes, EPDs contain the relevant environmental information regarding the phases of production and disposal in addition to important information on the usage phase. An EPD is based on the environmental performance assessment according to ISO 14040 and the IBU e.V. procurement regulations for wood-based materials.

### Expansion joints

**Planning expansion joints**

As with all wood-based organic materials, EGGER laminate flooring is subject to a certain degree of movement due to changing climatic room conditions (shrinkage / expansion). By means of sufficient expansion joints towards all fixed structural components, the finished flooring is not restricted in movement behaviour. As a fundamental principle, expansion joints of 8 mm to 10 mm (0.31” to 0.39”) must be created towards fixed structural components, such as walls, door frames, pipe conduits, pillars and stairways.

**Planning movement profiles**

Movement profiles must always be installed in the following cases due to the specific movement of the laminate flooring:

- Door thresholds
- Passageways
- Angled areas
- Individual room lengths and / or widths of more than 10 m (32.8’)

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<table>
<thead>
<tr>
<th>Consumption*</th>
<th>Designer flooring (LVT)</th>
<th>Ceramic tiles</th>
<th>Laminate flooring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy source (MJ)</td>
<td>210</td>
<td>165</td>
<td>106</td>
</tr>
<tr>
<td>Fresh water in litres</td>
<td>60</td>
<td>75</td>
<td>25</td>
</tr>
</tbody>
</table>

* Energy and water consumption for the production of 1 m² (10.76 square feet) of flooring:
Source: EPD’s Institut Bauen und Umwelt (Institute for Construction and Environment)
Fire classification

Classification of the combustibility of laminate flooring in so-called flammability classes. Since introduction of the CE marking EN 14041 for laminate flooring, the fire behaviour is tested according to DIN EN 13501-1.
EGGER laminate flooring is tested according to EN 13501-1 classified for the Euro class Cfl–s1.

CLASSIFICATION REQUIREMENTS

<table>
<thead>
<tr>
<th>Euro-class according to EN 13501-1</th>
<th>Possible sub-classes</th>
<th>Prior building material class according to DIN 4102</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>-</td>
<td>A1</td>
<td>Non-combustible</td>
</tr>
<tr>
<td>A2</td>
<td>s1, s2 or s3 and d0, d1 and d2</td>
<td>A2</td>
<td>Non-combustible</td>
</tr>
<tr>
<td>B</td>
<td>s1, s2 or s3 and d0, d1 and d2</td>
<td>B1</td>
<td>Low flammability</td>
</tr>
<tr>
<td>C</td>
<td>s1, s2 or s3 and d0, d1 and d2</td>
<td>B1</td>
<td>Low flammability</td>
</tr>
<tr>
<td>D</td>
<td>s1, s2 or s3 and d0, d1 and d2</td>
<td>B2</td>
<td>Normal flammability</td>
</tr>
<tr>
<td>E</td>
<td>d2</td>
<td>B2</td>
<td>Normal flammability</td>
</tr>
<tr>
<td>F</td>
<td>-</td>
<td>B3</td>
<td>High flammability</td>
</tr>
</tbody>
</table>

Formaldehyde

In nature, formaldehyde can be found for example in mammal cells as an intermediary product during normal metabolism. In humans, approximately 50 g are formed in this way and metabolised again. Formaldehyde is also naturally found in wood and diffuses in small amounts towards the outside. Most Central European countries recommend a maximum concentration of 0.1 ppm (parts per million) for living and recreation rooms. This threshold value applies for all wood-based materials. Compliance with this threshold value is symbolised by means of the E1 marking (according to the European EN 13986) for wood-based materials. Laminate flooring is a high-quality and hard-wearing floor covering on the basis of thin wood-based materials (HDF), with formaldehyde emissions in the lower range of the statutory thresholds. EGGER laminate flooring has an average formaldehyde content of 0.01 ppm, which corresponds to 1/10 of the permitted value. It is therefore in a range which can also be found in wood in its natural state.
General

EGGER laminate flooring is a floor covering for indoor use containing over 90% of the raw material wood. Due to the high proportion of wood material, the product is subject to natural changes in dimensions (shrinking and expanding) when climate conditions change. It is constructed using several components, which are permanently fused together using pressure and temperature (exception: DPR technology). The individual components are: wear layer, decorative paper, coreboard and balancer.

PRODUCT STRUCTURE

1. Highly resilient, highly scratch-resistant surface
2. Decor pattern
3. Swell stop plus coreboard consisting of natural wood fibres
4. Balancer
5. Silenzio underlay (only with identified decors)

Glueing

Laminate flooring elements installed in commercial applications must be sealed with glue along the edges. This sealing glue provides excellent protection against edge swelling due to moisture / liquids. Sealing glue is not required for residential applications. For EGGER laminate flooring products that are installed in commercial areas, edge sealing (EGGER Clic Sealer) or edge glueing (EGGER Strip-ex) is recommended (for the exception, see Aqua+ products).

HDF

HDF stands for High Density Fibreboard. HDF boards consist of fine fibreboards pressed with resins and adhesives under high pressure. The density of HDF should be at least 850 kg / m³. Due to their high strength and low material thickness, HDF boards are particularly well suited as coreboards for flooring products with a multilayer structure (e.g. our flooring with Cork+ Technology and laminate flooring). Furthermore, EGGER type “HDF swell stop plus” coreboards are especially resistant against the effects of moisture, therefore offering increased protection against edge swelling.

HPL

HPL – High Pressure Laminate

With this product, the laminate consisting of overlay, overlay and decorative papers impregnated with resins is pressed in the initial process step. In the second production step the laminate and the balancer laminate are bonded with the core board. Known as half-formats, the resulting boards are cut to the respective size after a cooling phase just like directly pressed laminates. The greatest advantage of these products is their high impact resistance and greater edge strength.
Impact resistance

EGGER laminate flooring is characterised by the high quality of the coreboard and outer layer, with excellent impact resistance and resistance to pressure marks.

Impact sound

Impact sound is the sound generated when walking on laminate flooring, which is perceived in rooms on lower levels. EGGER offers special Silenzio products which make a significant contribution towards sound reduction (also see “Ambient sound”).

In-floor heating system

In general, all EGGER laminate flooring is suitable for installation with in-floor heating systems. The following points must be observed:

- Prior to installation, all in-floor heating systems should have been subjected to a heating and cooling process, or respectively a functional test. Corresponding protocols prepared by the heating system contractor are to be submitted for this purpose.
- A maximum surface temperature of 28°C (82.4°F) applies for all heating systems.
- To ensure a certain inertia during heating and cooling, and thereby the possibility of adaptation of the laminate flooring to temperature changes, the heating system must either be integrated into the underfloor construction, or be equipped with a corresponding control unit.

Prior to installation, information can be found at www.egger.com and / or consult your copy of the product description.

General information on functional heating and screed curing: Using functional heating, the heating installer can check the system has been installed correctly. Following the functional heating, the screed is still very damp and the flooring cannot yet be laid onto this. The term “screed curing” refers to heating the screed gradually to prepare it for laying the flooring. The heating process follows the heating increments specified and documented in the heating protocol. The screed is ready for laying the flooring when the following residual moisture values have been reached: Calcium sulphate screed ≤0.3 %, cement screed ≤ 1.8 %.

Installation → see Installation

Installation as a floating floor

The flooring is laid on impact sound underlay. The flooring is not fixed to the sub floor. This is referred to as floating installation. It allows the laminate flooring to freely move on the sub floor, i.e. to “float”.
Installing / installation instructions

Prior to installation, inform yourself at www.egger.com and / or consult your copy of the product description. The installation procedure is explained fully in the installation instructions (using images). In addition, special installation videos are available for all product groups (JUST clic!, UNI fit! & Aqua+). You will find the installation videos on our homepage, YouTube or as a QR code in the installation instructions (included in every other pack).

Joints

Laminate flooring is an organic product and consists mainly of wood fibres. The elements can expand or shrink depending on climate conditions. In our installation instructions, we therefore specify that the ambient air temperature should be at least 18 °C with relative humidity between 40 % and 70 % before, during and after installation. Given these ambient conditions, the movement of the elements is not visible.

Kitchens

EGGER laminate flooring can be installed in the kitchens of private residences without any problems, they are abrasion and impact resistant, robust and resilient in accordance to their class of use. Increased exposure to moisture and liquids can be expected in kitchens over the course of normal use therefore in some cases, applying a sealing glue along the edges during installation is recommended (not required for Aqua+ products). We recommend removing kitchen cupboards before installing the flooring, and laying the EGGER laminate flooring only up to / just under the base. This prevents unbalanced loads and fixation of the floating floor installation and also makes subsequent removal straightforward.

Laying direction

Laminate flooring looks best when the panels are installed parallel to the light direction. If board flooring has been used as a sub floor, the laminate flooring must be laid at right angles to the boarding.

Light-fastness

EGGER laminate flooring is resistant against UV radiation (sunlight). There is no unwanted discolouration or bleaching of the decor image in the course of use. Testing method EN ISO 105-B02

Moisture barrier

Using a moisture-protection film, the laminate flooring surface can be adequately protected against possible rising subfloor moisture over the entire lifespan. This is especially important with mineral floor substructures, as these can absorb, store transport and release moisture. In the case of a floating installation for laminate flooring elements over a mineral sub floor (e.g. screed or tiles), it is possible for moisture existing within the sub floor to seep to the surface of the sub floor. For this reason, a moisture-protection film with a vapour barrier with an SD value ≥ 75 m must be laid before applying an insulating sub floor. Properly and professionally laid, the strips must overlap 20 cm in the joining areas.
Moisture-prone areas

Moisture-prone areas = Rooms with elevated but not permanent moisture exposure and / or periodically high relative humidity (also see “Wet areas”).

Office chairs

In general, EGGER laminate flooring is suitable for the use of chair and furniture rollers. Please note that these must be castor type “W“ (soft). Ask your retailer for further information.

In general:
Hard floor coverings → soft chair rollers
Soft floor coverings → hard chair rollers
As an alternative, fitted office chair underlays can also be used on hard floor surfaces.

PEFC

PEFC stands for sustainable, responsible forestry and the controlled further processing of the natural product wood. This ensures that our forests are preserved as a natural resource, place of work and recreational area for future generations. The PEFC is an internationally recognised framework for the certification of wood and wood products.

Processing

The cutting and fitting of the individual panels can be performed with all conventional tools, for example a jigsaw or a handheld circular saw. In all cases, the finest possible teething and suitability for wood processing products are recommended. Resulting sawdust should be vacuumed off. Please be sure to use the correct eye and ventilation protection. Alternatively, using so-called “laminate punches or shears” is also a possibility.

Quality

Quality comes first at EGGER. In our company, we work with highly modern technology, in keeping with the latest quality standards and requirements. EGGER has an excellent quality management system and is certified according to ISO 9001.

Resistance to stains

Tough stains can be removed with commercial solvents such as white gas (benzene) or thinner. These products will not damage your laminate flooring in any way. However, always apply the solvents with a cloth and never directly onto the laminate flooring, and subsequently neutralise with water, and ensure sufficient ventilation / fresh air supply.
**Room climate conditions**

Before, during and after installation, the ambient air temperature should be at least 18 °C with relative humidity between 40 % and 70 %. The flooring should be left to acclimatise for 48 hours prior to installation.

**Silenzio**

At EGGER, Silenzio equates to impact sound underlays (Silenzio Easy, Silenzio Duo and Silenzio Thermo), as well as to special product groups that feature impact sound underlay bonded directly to the panel.

**Skirting boards**

Skirting boards may be required to finish the gap between the laminate flooring surface and walls for an overall harmonious appearance. You will find the matching solution in the EGGER accessories programme.

**Slip-resistant characteristics according to DIN 51130**

In Germany, only laminate flooring that has been tested, certified and classified in a corresponding R-class (e.g. R9, R10, etc.) according to DIN 51130 may be installed in work areas with an elevated risk of slipping according to Employer’s Liability Insurance Association Rules (BGR) bulletin 181. The classification of slip-resistance according to DIN 51130 is not a mandatory requirement for laminate flooring. Accordingly every laminate flooring manufacturer is free to decide whether and which products are correspondingly designed, tested and certified. In this context, we would also like to point out that not all surface textures are developed and designed for such a classification, which means they do not meet the requirements for R-classification and therefore cannot be installed in work rooms and work areas with an elevated risk of slipping according to Employer’s Liability Insurance Association Rules (BGR) bulletin 181.

EGGER laminate flooring with the Barnwood, Vintage, Antique and Grand Canyon textures have been tested and certified accordingly:

<table>
<thead>
<tr>
<th>Structure</th>
<th>Slip resistance class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnwood (ST62)</td>
<td>R10</td>
</tr>
<tr>
<td>Vintage (ST43)</td>
<td>R10</td>
</tr>
<tr>
<td>Grand Canyon (ST63)</td>
<td>R10</td>
</tr>
<tr>
<td>Antique (ST62)</td>
<td>R10</td>
</tr>
</tbody>
</table>

**Stairs**

The installation of laminate flooring on stairs is possible with the EGGER stairway profile system.
**Standards**

The requirements, specifications and tolerances for laminate flooring are defined in the European EN 13329 standard for DPL and the EN 15468 standard for PDL (EGGER DPR).

**DIN EN 13329:** Laminate floor coverings – elements with a surface layer based on aminoplastic thermosetting resins – specifications, requirements and test methods;

**DIN EN 15468:** Laminate floor coverings – elements with directly applied printing and resin surface layer – specifications, requirements and test methods;

Further standards are:

**DIN EN 14041:** Resilient, textile and laminate floor coverings – essential characteristics;

**DIN EN 1815:** Resilient and textile floor coverings – assessment of static electrical propensity;

**DIN EN 13501:** Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests;

**DIN EN 13986:** Wood-based materials for use in construction – characteristics, evaluation of conformity and marking;

**Strips**

Profiles are required to cover transitions, edge finishes and expansion joint areas. The matching solution can be found in the EGGER accessories programme. Also see “Expansion joints”.

**Sub floor**

The vendor, within the scope of duty of care and due diligence should verify that the sub floor has been prepared for installation in accordance with normal sub floor preparation procedures and accepted tolerances within the flooring industry. The sub floor must be dry, even, clean and able to provide a supporting surface.

Suitable sub floors:
- All types of screed including hot water-heated screed
- Chipboard constructions
- Fibreboard
- Floor coatings such as PVC, linoleum, natural stone slabs and ceramic tiles

Suitable sub floors subject to restrictions:
- Electrically operated in-floor heating (max. 28 °C) (surface temperature control, output)

Unsuitable sub floors:
- Textile floor coverings
- Sub floors not prepared for installation in accordance with normal procedures and accepted tolerances within the flooring industry
**Surface**

The surface of laminate flooring consists of a highly durable wear layer, which retains beauty for many years provided that a few rules of conduct and care instructions are followed.

A few basic rules for the maintenance of laminate flooring are listed below:

- Entrance areas require an appropriate clean-off zone. Use door mats (or rugs) in the entrance area in order to keep away coarse dirt, grit and stones from the laminate flooring.
- In commercial applications where the laminate flooring area leads directly outside, an appropriately sized clean-off zone should be built into the floor structure.
- Attach felt pads to the feet of all furniture.
- Clean felt pads and casters regularly, check for proper functionality and replace if required.
- Lift furniture when moving, rather than pushing or dragging.
- Built-in kitchens and built-in cupboards should be assembled prior to installation and the laminate floor should be placed just under the base.
- Use soft furniture castors (type W).
- Use the hard floor nozzle when vacuum cleaning.
- Never use abrasives or scouring agents on the laminate floor.
- Immediately remove stagnant moisture fluids (humidity).
- Steam cleaners should not be used, with the exception of designated Aqua+ products.
- Clean the floor with a lightly damp cloth.
- Do not use residue building cleaning products (we recommend our laminate flooring cleaner CLEAN IT by EGGER).
- Waxing and / or polishing is not necessary or permitted.
- Sealing the laminate floor after installation is not necessary or permitted.

**Swelling**

Swelling along the edges is usually due to moisture and / or liquids penetrating the joints between the elements from above. This moisture / liquid must act on the surface or joints between the elements for an extended period of time in order to cause swelling.

**Underlay Materials**

Underlay is part of the installation system and has a major impact on the comfort and durability of floating laminate flooring. The material-specific properties of the underlay materials therefore have a significant influence on their quality and the lasting effectiveness of their key functions – ambient & impact sound insulation – suitability for in-floor heating systems – top layer protection (laminate flooring) – ease of installation. We recommend using system-specific EGGER Silenzio underlay or an alternative underlay as specified on [www.egger.com/flooring-information](http://www.egger.com/flooring-information)

**Thermal conductivity**

Thermal conductivity is the ability of a material to conduct heat and is therefore responsible for the perception of heat and cold. With high thermal conductivity, we perceive the material as being colder; with low thermal conductivity, we perceive the material as being warmer.
**Thermal resistance**

Thermal resistance (unit: m² K / W) is the resistance of a structural component to the transmission of heat. The greater this value is, the better the insulation characteristics are. In order not to impair heating performance, the thermal resistance of the floor structure (floor surface + insulation underlay) should not be more than 0.15 m² K / W for the installation of laminate flooring or parquet flooring on a warm water in-floor heating system.

**Walking safety according to EN 14041 (EN 13893)**

EGGER laminate flooring is a floor covering that is safe for walking, not too smooth, and poses no risk of slipping. Walking safety is a safety requirement for the CE marking met by all EGGER laminate flooring. According to EN 13893, EGGER laminate flooring has a coefficient of sliding friction $\mu$ of $\geq 0.3$ and is therefore classified in technical class DS according to EN 14041.

Walking safety is a requirement for the CE marking that is met by all EGGER laminate flooring products. In accordance with EN 14041, EGGER laminate flooring is classified in technical class DS (“Dry Slip resistant”) (coefficient of sliding friction $\mu \geq 0.3$ as per EN 13893). Furthermore, in accordance with DIN 51130, we also have several products in our range that are classified in the anti-slip class R10 (as per Employer’s Liability Insurance Association Rules (BGR) bulletin 181 – Specification for work areas with an elevated risk of slipping). For more information, see “Slip-resistant characteristics” on page 20.

**Wall installation**

EGGER flooring boards can also be used as panelling for walls or wall surfaces. Detailed information on this topic is available on our homepage at: EGGER / Products / Flooring / Installation / Wall installation

**Warping**

Warping of the floor is generally caused by non-existent or under-dimensioned expansion or movement joints. Even minimum contact points are sufficient to cause warping of individual elements at a different location (see “Expansion joints” for more information).
Warranty and guarantee

In addition to the statutory warranty / product liability period, which for example is 2 years in Germany, a guarantee declaration represents voluntary additional performance by the manufacturer. For EGGER laminate flooring in private residential applications, we guarantee triple security:

- Hygienic – Easy to clean and maintain
- Impact-resistant – Stands up to stress
- Long-lasting – Beautiful decorative surfaces and edges for many years due to the extremely hard surface

We ensure this with our abrasion guarantee and even include the edges. Depending on the abrasion class, this performance guarantee applies for a period of between 7 and 30 years in private residential applications. You will find further information in our EGGER guarantee declaration!

Wet rooms

Wet rooms = Rooms where water / liquids occur during normal use in such quantities that floor drainage is required (also see “Moisture-prone areas”).