

MORE FROM WOOD.



EGGER LAMINATE FLOORING - A PRACTICAL GUIDE

LAMINATE FLOORING – A UNIQUE PRODUCT





EGGER

LAMINATE FLOORING – A PRACTICAL GUIDE FROM A - Z

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ABRASION

Abrasion is understood as being the wear of the abrasion layer. With the complete wear of the abrasion layer, the decorative layer is affected and destroyed. EGGER laminate floorings have a high abrasion resistance. In accordance with their classification, we guarantee for our laminate floorings an abrasion resistance in private living areas of between 7 and 25 years.

ACCESSORIES

EGGER offers an extensive accessory programme to meet your needs. Among other things, you will find trim, 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 of laminate flooring, one can even come to the conclusion that laminate flooring is especially suitable for individuals suffering from allergies. Dust mites and other allergy causing organisms cannot survive on properly cleaned laminate flooring, and therefore also cannot trigger an allergy. Naturally, this is also 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. Here EGGER offers special *silenzio*[®] products which make a significant contribution towards sound reduction.

ANTISTATIC

With the static properties of laminate floorings we principally differentiate between conductivity and antistatic properties. A static charge of an individual can lead to a noticeable discharge being felt when metal is touched. Individuals becoming statically charged is a completely normal process. When these charges are not able to leave the body before they have accumulated to a certain size, contact with metallic objects inevitably leads to the so called “electric shock”. The sensation can arise with static charges of more than 2 kV (kilovolts). The 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 floorings which have been tested and certified according to the EN 1815 standard can be declared as “antistatic”. Conducting flooring is always required in those cases where the rooms have special requirements. These include and control centres, operating theatres, intensive care units and explosion-prone zones. Here the suitable floor surface for this purpose is especially laid and connected to the potential equalisation of the building (grounding) by a master electrician. Due to the physical characteristics of a wooden material, conducting floors with laminate flooring are not possible.

BASEBOARDS

You require baseboards to finish the gap between the flooring and walls for a harmonious overall appearance. You will find the matching solution in the EGGER accessories programme.

BATHROOM

EGGER laminate flooring is not suitable for installation in humid conditions or areas with splashed water, such as bathrooms or saunas. Installing EGGER laminate flooring in private kitchens is possible (see Kitchens).

BLUE ANGEL

The Blue Angel is the first and oldest environmental emblem for products and services in the world. All EGGER laminate flooring collections have earned the familiar “Blue Angel” environmental emblem.

What this means for EGGER laminate flooring:

- Mainly made from renewable raw materials
- Environmentally friendly production
- Materials that do not pose a health hazard
- No hazardous substances of content that present a risk in the course of recycling

BONDING

The bonding of EGGER laminate flooring to the sub floor is not possible (e.g. silenzio® systems) or not recommended.

BUCKLING

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)

BUILDING AUTHORITY APPROVAL

In addition to the CE marking, laminate flooring 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 them to swell up. 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 and can thereby cloud the surface.

CARPETED FLOOR

Carpeted floors do not constitute a suitable sub floor and must be removed prior to the installation of laminate flooring. Reasons include that carpeted floors may yield excessively under load, and that carpeting is what is called directional for production technology reasons and this would be transferred directly to laminate flooring with floating installation. Hygienic aspects are another consideration, since carpeted floor may rot underneath laminate flooring.

CE MARKING

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.








CLASS OF USE

Quality category and classification according to the European standard EN 13329 for DPL and CML / EN 15468 for DPR®, which distinguishes the area of application for laminate flooring and according to which all EGGER laminate flooring is manufactured and classified. One differentiates between “residential” and “commercial” with medium, normal and high wear. For improved identification, the classification classes are represented by means of pictograms:

How a product can be allocated to a class depends on the following criteria:

- Abrasion resistance
- Shock resistance
- Insensitivity to stains
- Behaviour towards cigarette burns
- Behaviour during displacement of a furniture foot
- Suitability for chair rollers
- Swelling behaviour

CLASSIFICATION OVERVIEW

Stress Class	Symbol	Description	Sample Applications
RESIDENTIAL - moderate		Part-time use	Bedroom, Guestroom
RESIDENTIAL - normal		Normal use	Living room, dining room, hall ways/corridors
RESIDENTIAL - heavy		Intensive increased use	Entrance areas, kitchens and living areas
COMMERCIAL - moderate		Part-time use	Hotel rooms, conference facilities, small offices
COMMERCIAL - normal		Normal use	Offices, waiting rooms, boutiques
COMMERCIAL - heavy		Intensive increased use	Open-plan offices, stores, multi-purpose halls
COMMERCIAL - very heavy-duty		Very Intensive, highly frequented use	Entrance halls, shopping mall

CLEANING

The sealed surface of laminate flooring allows problem-free cleaning. Daily maintenance cleaning is performed with the vacuum cleaner or by wiping with a damp cloth. During wiping, care should be taken that no moisture remains on the surface. Please see our cleaning instructions for further information!

CML

CML – Continuous Multi-Layer Laminate

With this novel production technology, a material structure similar to HPL is applied to the coreboard in a direct pressing process. The paper layers especially impregnated for this purpose are pressed together with the carrier material on a double band press developed expressly for this process. The semi-formats manufactured in this way are confectioned to element size after a cooling phase. This technology results in a product that combines the advantages of DPL and CPL technology. EGGER CML laminate flooring has a low-stress structure, is extremely impact resistance and has very high edge stability.

DAMAGES

You can repair small damages to the surface with a repair mass. A corresponding repair mass is available in our accessories program for light and dark decors. With larger damages it is always possible to replace one or several panels. You can request detailed instructions for panel replacement at any time from EGGER.

DIRECT PRINTED FLOORING

PDL = EGGER DPR® – Direct Print Technology

The colour is applied directly to the panel using water-based colour components with virtually no solvents. The transparent lacquer components hardened with ultraviolet light guarantee the surface hardness and act as the abrasion layer.

DISPOSAL

Laminate flooring is classified as ecologically harmless household waste, which means it can be disposed of in landfills or incineration plants.

DPL – DIRECT PRESSED LAMINATES

With these products, a decor paper and an overlay are pressed directly onto the carrier material. Corresponding balancer papers are added on the reverse side. The papers impregnated with resin are pressed together with the coreboard in a single stage process. These so-called semi-formats are confectioned to element size after a cooling phase.

ECOLOGY

Apart from its 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.

EDP  ECOLOGY

EN  STANDARDS



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 about the phases of production and disposal as well as 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

Like 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 sufficiently dimensioned expansion joints towards all fixed structural components, the finished flooring is not restricted in its movement behaviour.

As a fundamental principle, expansion joints in a width of 8 mm to 10 mm (0.31" to 0.39") must be formed towards fixed structural components such as walls, door frames, pipe conduits, pillars and stairways etc.

Planning of movement profiles

Due to the specific material movement behaviour of laminate flooring, movement profiles must always be installed in the following size/area ranges:

- Door transitions
- Passageways
- Angled rooms
- Individual room length and/or individual room width of more than 10 metres

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

Euro Class according to EN 13501-1	Possible subclasses	Previous construction material class according to DIN 4102	Designation
A1	-	A1	Not combustible
A2	s1, s2 or s3 and d0, d1 and d2	A2	Not combustible
B	s1, s2 or s3 and d0, d1 and d2	B1	Flame resistant
C	s1, s2 or s3 and d0, d1 and d2	B1	Flame resistant
D	s1, s2 or s3 and d0, d1 and d2	B2	Normal combustibility
E	d2	B2	Normal combustibility
F	-	B3	Easily combustible

FLOATING INSTALLATION

EGGER laminate flooring is installed without a fixed connection to the sub floor, which means that the individual laminate flooring elements are only connected to each other by means of the tongue and groove. This is referred to as floating installation. It allows the laminate flooring to freely move on the sub floor, i.e. to “swim“ or “float“.

FORMALDEHYDE

In nature formaldehyde, can for example, be found in mammal cells as an intermediary product during normal metabolism. In humans approximately 50g are formed in this way and metabolised again. Formaldehyde can also be found naturally in foods such as apples and grapes. 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 standard 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 wood material which consist 90% of the raw material wood. EGGER laminate flooring consist of

different components (top layer, decorative layer, carrier layer and if applicable, rear side coating). EGGER laminate flooring is for interior use only. Due to the high proportion of the raw material wood, laminate flooring is subject to natural dimensional variation properties.

GLUING

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.

HDF

High density fibreboard (abbreviated HDF) is the term used for wood material panels that are made of resin bonding systems and pressed wood fibres and which were particularly highly compressed. The density of a HDF should be at least 850 kg/m³. Preferred application as carrier material for high loading with low material thickness (e.g. laminate floorings).

HPL

HPL – High Pressure Laminate

With these products, the laminate made of overlay impregnated with resin, decor and kraft paper are pressed together in the first process step. In the second process step, the laminate and the balancer paper laminate are bonded to the coreboard. These so-called semi-formats are confectioned to element size after a cooling phase as with the directly pressed laminates. The greatest advantage of these products is in the high impact resistance and edge stability.

IMPACT SOUND

Impact sound is the sound generated when walking on laminate flooring, which is perceived in rooms on lower levels. Here EGGER offers special silenzio® products which make a significant contribution towards sound reduction.

IN-FLOOR HEATING SYSTEM

In general, all EGGER laminate flooring is suitable for installation on underfloor heating systems. The following points must be observed:

- Prior to installation, all underfloor 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 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, obtain more information at www.egger.com or from your copy of the product description.

INSTALLATION DIRECTION

Laminate flooring looks best when the panels installed parallel to the light direction. However, a binding specification for the installation direction only applies when floorboards are used as the sub floor; in this case, it must be installed crosswise to the floorboards.

INSTALLATION ❖❖❖ INSTALLATION INSTRUCTION

JOINTS

Under conditions of low relative humidity, wood and wood-based materials start to manifest what could be termed increased shrinkage behaviour due to the release of moisture. At a relative humidity below 40 %, shrinkage forces of such magnitude can develop that the laminate flooring no longer reacts as a “sheet”, but rather in the individual elements. This can lead to the formation of visible gaps.

KITCHENS

EGGER laminate flooring can be installed in the kitchens of private residences without any problems, since they are abrasion and impact resistant, robust and resilient according to their usage class. Installation in bathrooms is not possible (see Bathrooms).

LAYING / INSTALLATION INSTRUCTIONS

Prior to installation, inform yourself at www.egger.com and / or consult your copy of the product description.

LIGHT-FASTNESS

EGGER laminate flooring is resistant against UV radiation (sunlight). Undesirable discolouring or fading of the decor image does not occur.

MOISTURE BARRIER

Using a 0.2 mm thick PE film, you can adequately protect the laminate flooring surface against possibly rising underground moisture over the entire lifespan. This is especially important with mineral floor substructures, since these can absorb, store, transport and release moisture.

OFFICE CHAIR

In general, EGGER laminate flooring is suitable for the use of chair and furniture rollers. Please note that these must correspond to the type “W” (soft). Ask your specialist dealer for more information.

The general rule is:

Hard flooring → soft chair rollers

Soft flooring → 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 means our forests are also maintained for future generations as their basis of livelihood, working environment and as a recreation area. 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 regular commercial tools, such as for example a jigsaw or a handheld circular saw. Recommended in all cases is as fine a teething as possible and the suitability for wood processing. The sawdust created should be vacuumed off. Please also observe corresponding eye and breathing protection. As an alternative there is also the possibility of using so-called “laminate die cutters or shears”.

PROFILES

You require profiles to cover transitions, edge finishes and expansion joint areas. You will find the matching solutions in the EGGER accessories programme.

QUALITY

Quality comes first at EGGER. In our company, we work with highly modern technologies, 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.

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%.

SHOCK 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. In accordance with the respective classification, we guarantee impact resistance in private residential applications according to the applicable standards for between 7 and 25 years for our laminate flooring.

SILENZIO®



The EGGER silenzio® system is based on a special underlay connected directly to the reverse side of the panel. This results in a significant reduction of ambient and impact sound. Other types of underlay for ambient and impact sound insulation must not be used in combination with EGGER laminate flooring with integrated underlay (silenzio®).

SLIP RESISTANCE PROPERTIES 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 rooms and 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 textures Stone, Vintage, Authentic and Grand Canyon have been tested and certified accordingly:

Surface	Class of slip resistance	
Stone (ST62)	R10	
Vintage (ST43)	R10	
Authentic (ST62)	R10	
Grand Canyon (ST63)	R10	

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 standards EN 13329 for DPL / CML as well as EN 15468 for DPL (EGGER DPR®), and are binding for all European laminate flooring manufacturers.

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

SUB FLOOR

The sub floor must be dry, even, clean and able to provide a supporting surface.

SURFACE

The surface of laminate flooring consists of a highly durable wear layer, which retains its 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:

- Sharp and pointy objects such as dirt, sand and / or stones may stick to your shoes. These can be efficiently eliminated by means of suitable door mats at exterior doors. Pets with very sharp toenails may also cause scratches.
- The legs on furniture (chairs, tables, wardrobes etc.) should be equipped with adequate protection. Felt is commonly used. Ensure that sand and stones do not stick to the protective covering on furniture legs.
- “Mobile” furniture such as office chairs, sofas and easy chairs must be equipped with soft rollers. Hard or damaged rollers may cause scratching. Also ensure that the rollers can turn freely. If all of this is not possible, install suitable protective caps. Furniture can be moved on these caps.
- When moving heavy pieces of furniture, you should lift them rather than sliding them.
When using a vacuum cleaner, also check that the rollers have not been damaged, are not too hard and can turn freely, and that the suction opening is undamaged and not too hard.
- Never use scouring or abrasive products on the flooring.
- The use of steam and / or wet cleaning equipment is also not 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 / joints between the elements for an extended period of time in order to cause swelling.

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: $\text{m}^2\text{K}/\text{W}$) 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 $0.15 \text{ m}^2\text{K}/\text{W}$ for the installation of laminate flooring or parquet flooring on a warm water underfloor heating system.

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.

WALKING SAFETY ACCORDING TO EN 14041 (EN 13893)

EGGER laminate flooring is safe for walking, not too smooth and does not represent a risk of slipping. Walking safety is a requirement for the CE marking that is met by all EGGER laminate flooring. According to EN 13893, EGGER laminate flooring has a coefficient of sliding friction μ of ≥ 0.3 and is therefore classified in technical class DS according to EN 14041.

WARPING

Warping of the floor is generally caused by nonexistent and / or under-dimensioned expansion / movement joints. Even minimum contact points are sufficient to cause warping of individual elements at a different location.

WARRANTY AND GUARANTEE

Apart from 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 the following:

Three fold security

- Hygienic - easy to clean and maintain
- Shock-resistant - withstands a lot of stress
- Long-lasting - beautiful decor surfaces and edges for many years thanks to the extremely hard surface

We ensure this with our abrasion guarantee. That even includes the edges. Depending on the abrasion class, this performance

guarantee applies for a period of between 7 and 25 years in private residential applications. You will find further information in our EGGER guarantee declaration!

WINTER GARDEN

The installation of EGGER laminate flooring in winter gardens 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.



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Service, advice and more:

