EUROPEAN PRODUCERS OF LAMINATE FLOORING
FEDERATION EUROPEENNE DES FARBICANTS DE REVERTEMENTS DE SOL STRATIFIES
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Technical Bulletin

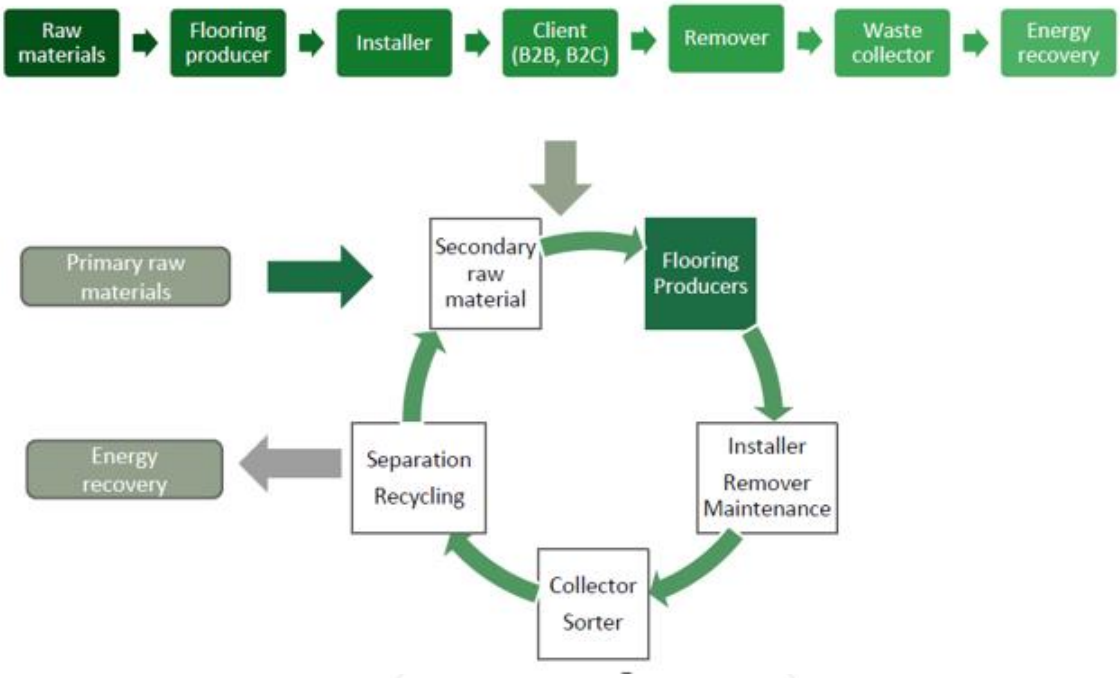
R-Strategies and Lifespan of Laminate Floor Coverings

(English edition 11/2024)

Contents

1. Introduction

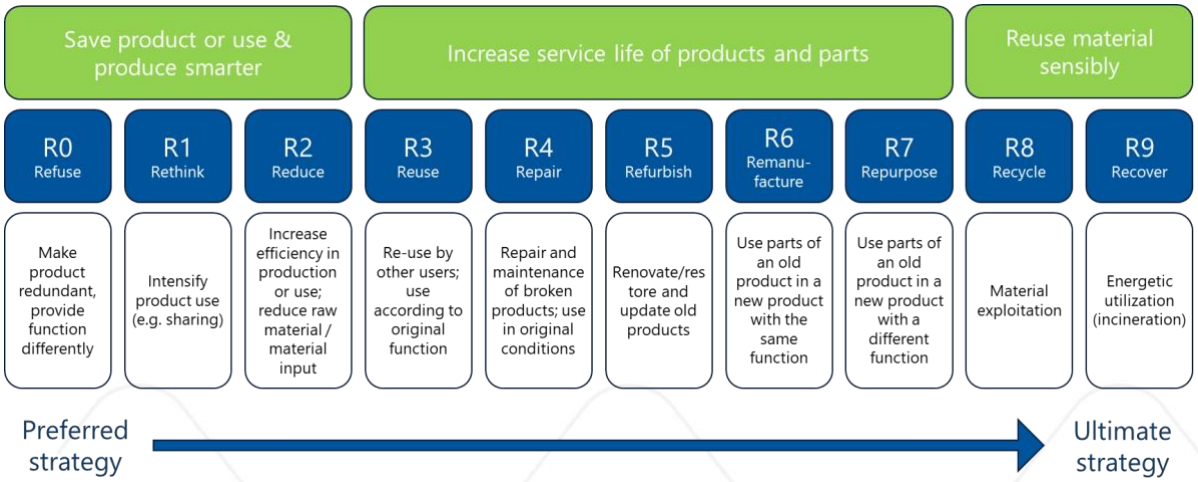
A laminate floor covering following EN 13329 is a sustainable product which contains up to 85 % wood in mass from sustainable forestry and the recyclability is possible. Nevertheless, also for this product group challenges exist to move away from the linear economy to a circular economy (picture 1).



Picture 1 Transition from linear to circular economy (Source: CISUFLO project)

The European Commission has set the political framework for this transition with the European Green Deal. Details on the implementation of this strategy for construction products, including flooring, are set out in the Regulation of the European Parliament and the of Council laying down harmonised conditions for the marketing of construction products (CPR). According to this regulation manufacturers of flooring must provide involved stakeholders with a wide range of information about the entire life cycle of the product and its lifespan. Some of this information is included in this bulletin.

R-strategies (see picture 2) contain measures in the life cycle of a product to reduce waste and its environmental footprint, to ensure a circular process and to extend the lifespan. The sequence represents a certain priority in terms of energy consumption, but this cannot always be generalized.



Picture 2 R-strategies and its purposes (Source Mast et.al 2022, modified)

The average lifespan of laminate floor coverings depends on the type of use. It can be estimated that around 90 % of laminate flooring is used in the domestic use. The remaining 10 % are installed in the commercial area (e.g. shops, hotels). It is estimated that most laminate floors in the domestic use are overengineered because they are classified in level of use classes 32 and 33 according to EN 13329, which are intended for the commercial sector. Based on long-term experience starting in the early 1990s, the following statements can be made about the average lifespan of laminate floor coverings:

Table 1 Lifespan of laminate floor coverings

Products of Level of use class	**Lifespan in years in domestic use (class 21-23)***		**Lifespan in years in commercial use (class 31-34)**	
	minimum	**average**	**minimum**	**average**
21	15	25	Not applicable	Not applicable
22				
23	15	25	Not applicable	Not applicable
31*			10	15
32*	20	30	10	15
33*	25	35	10	15
34*	30	40	10	15

* 90 % of laminates is installed within in domestic use even it is very often produced for other levels of use. Approximately 10 % of laminates is installed in commercial use.

Based on these experiences at least an average lifespan of 25 years can be expected for the group laminate floor coverings.

Statements regarding minimum lifespans are very often agreed in tailor-made warranty times.

The information on minimum and average service life is based on the assumption that the manufacturer's instructions for installation and maintenance are observed over the entire service life.

It is planned that information about the R-strategies and the lifespan will be integrated into the individual Digital Product Passport of the laminate flooring.

Measures to design laminate floorings for the circular economy are described in CEN/TS 18075 too.

R-strategies

The R-strategies **R0 Refuse** and **R1 Rethink** are not applicable for laminate floor coverings. In the following enumerations the applicable R-strategies are described for this product type.

To avoid the need for the tasks described in the R-strategies **R4 Repair** and **R5 Refurbish**, the following preventative measures are to be taken into consideration:

- Entrance areas must be fitted with a properly sized clean-off zone / doormat.
- In commercial applications where the laminate flooring area leads directly outside, an appropriately sized clean-off zone must be built into the floor structure.
- Built-in kitchens and built-in cupboards should be assembled prior to installation and the laminate flooring elements should be placed only until under the base. Laminate flooring is designed for a floating installation allowing it to follow its natural movement pattern. Movement should therefore not be blocked or restricted by heavy objects. In the unlikely event that, after placing heavy furniture, household appliances and other heavy items, the floor covering undergoes significant distortion, it is recommended that the object be placed elsewhere.
- Lift furniture when moving it – do not push it unless a cloth or blanket is placed below the furniture feet.
- Attach felt pads to the furniture feet, including chairs and tables. Clean these regularly and inspect for proper functionality replace these if required.
- For office chairs and all other objects on rollers, soft furniture castors (type W) are to be used. Clean the castors regularly, inspect for proper functionality and replace if required. If suitable chair castors are not available, a floor protection mat must be used.

- Use the brush attachment when vacuum cleaning. Rotating beater bars must be deactivated / removed.
- Wipe the Laminate Flooring with a slightly damp cloth only.
- Remove spilled liquids and standing moisture immediately. Do not flood / rinse the floor with water or other liquids.
- Do not use cleaning products that may leave a residue. We recommend using system-specific floor cleaner by the manufacturer.
- Do not use any grinding, scouring or polishing machines, scrubbing brushes, high-pressure cleaners or similar products on laminate flooring.
- Never use abrasive or scouring agents, or steel wool on laminate flooring.
- Waxing and / or polishing laminate flooring is not allowed and should not be done.
- When cleaning laminate flooring with a steam cleaner, it must be kept moving at all times. The steam cleaner should only be filled and operated with clean water. Do not add cleaning products or other additives.
- When installing and using laminate flooring in hair salons, beauty parlours or similar spaces, please note that the surface areas under and around the stools or similar areas must be covered / equipped with a sufficiently large protective mat. This is because hair dye and other coloured substances, as used in hair salons for example, may lead to irreversible staining / changes to the floor surface depending on concentration, ingredients and length of application. If hair dye, bleaching agents or other colouring substances should come into contact with the flooring surface, they must be removed immediately, and the affected area neutralized with a damp cloth. Please also read the instructions for use on the package leaflet of the respective product.

The use of laminate floor covering **is not recommended** for the following applications.

- **Extremely wet rooms:** Laminate flooring is susceptible to damage from moisture. Therefore, it is not suitable for areas such as laundry rooms, saunas, commercial washrooms or commercial kitchens, or other very humid environments.
- **Outdoor Areas:** Laminate flooring is not intended for use outdoors or in areas exposed to direct sunlight as this may cause discoloration and other damage.
- **Areas with strong mechanical stress:** Laminate flooring can be damaged by intensive use and high mechanical stress, such as those found in workshops or storage rooms.

For a better understanding of the measures of the R-strategies the following definitions related to laminate floor coverings are to be taken into consideration:

a. ***End of Life***: When the laminate flooring is removed due to excessive damage and when repair is no longer possible (see R4) and/or when the decoration needs to be changed/updated (see R3 with reuse in such a case).

b. ***Laminate flooring***: Rigid floor covering, typically in a plank or tile format, with a multiple layer structure: e.g. optional underlay, backer, substrate (core), decor and worked edges that allow the product to be joined together to form a larger integral unit. The substrate is the majority (>95 %) of the total weight and is generally HDF but it can also be a particle board. The core material should contain wood for at least 65 % in mass. Thickness varies between 6 mm and 14 mm.

c. ***Floating installation***: The floor covering is not firmly attached to the subfloor. No glue, nails or screws are used to maintain the floor in place. The floor covering is free to move. Floating is the privileged installation mode for Laminate flooring.

d. ***Glued-down installation***: The floor covering is firmly attached to the subfloor with some glue. Laminate flooring is generally not glued down.

e. ***Mechanical locking***: Interlocking system to maintain individual elements connected together to create a continuous flooring (larger integral unit) without any glue.

f. ***Glued T&G***: Traditional connection combining tongue (male) and groove (female) assembling and usually PVAC glue to create a continuous flooring.

g. ***Wood fibers:*** are the smallest wood particles that can be divided with a length between 1 and 15 mm (depending on the wood specie) and they are used to produce paper, insulation, MDF and HDF.

h. ***MDF***: Medium-Density Fiberboard is a composite wood fiber board with a density around 600 kg/m^3 and a thickness between 10 mm and 40 mm. Wood fibers are bound together using a synthetic resin or other suitable binder. MDF is used a lot in the furniture industry because this material is strong and easy to cut/mill.

i. ***HDF***: High-Density Fiberboard is a composite wood fiber board with a density over 800 kg/m^3 and a thickness between 5 mm and 15 mm. Wood fibers are bound together using a synthetic resin or other suitable binder. Mechanical locked laminate flooring is usually using HDF substrate to ensure a good milling quality of the click.

j. ***Particle board***: Wood based panel manufactured from wood chips, sawmill shavings, and sawdust, which are bound together using a synthetic resin or other suitable binder. Glued T&G laminate flooring could be using particle boards.

k. ***Underlay***: Intermediate layer which is part of the flooring system, and which can be attached to the backing of the laminate flooring or loose laid on the subfloor. The underlay is designed to smoothen the minor irregularities from the subfloor and to support mechanically the laminate flooring. The underlay is contributing to the durability and to the acoustic/thermal properties of the flooring system. Underlay is usually polymer-based (polyethylene, polystyrene, polyurethane, …) but it can also be natural-based (wood fibers or cork).

R2 Reduce

The R-strategies are one tool on the way to a more circular economy. Reduce, as one of the top-level R-strategies, picks up on the idea that the impact of any production can be minimized by making targeted savings in the use of resources. Reducing does not mean renunciation, but rather improving processes.

For laminate flooring there can be different options to reduce the need of raw materials during the production and there can also be options for the end user.

Possible option during the production processes may be the technical optimization of the different layers that lead to thinner layers with less resource consumption. This might be possible for all components of Laminate Flooring. A similar sounding but different point in terms of content is a decreased thickness of the total product.

Technical improvements in cutting technology like thinner blades lead to reduced production loss. On the other hand, production by-products should be used wherever possible to substitute raw materials.

A big potential of reducing the environmental impact of Laminate Flooring production might be substitution of fossil based raw materials by renewable ones. For example, establishing biobased glue systems for industrial production processes or partial replacement of ingredients with renewable alternatives.

Also a reduction of the packaging and to change the type of packaging to renewable material can reduce the environmental impact.

The end user can also play an important role. In combination with the producer's information and the service at sales point the end user can decide for the right product in the right area. This means in the product standard for Laminate Floor coverings, the EN 13329, the level of use is translating the expected intensity of use in real life application. Almost all Laminate Floorings produced by EPLF members are designed to fulfil the requirements set in EN 13329 for the different levels of use. The requirements increase with increasing level of use. So, with a better understanding of these interdependencies the end user can make a better decision of the right product classification for the real-life application.

At the end Laminate Flooring is almost in every case used in combination with an underlay material.

So also, for the underlay material any option for reduced resource consumption during production like lower weight, less packaging, transport-optimization etc. decreases the impact and an optimized product selection helps to avoid inefficient use of resources.

In addition to the above-mentioned points there might be also a reducing potential in sharing for example old-stock material (pre-consumer material) with charity organizations or local social projects.

R3 Reuse

The practice of utilizing a product or material again by the same or different users (post-consumer use) in a different location, maintaining its original function.

1. Special Applications of Laminate Flooring Reuse

Laminate flooring reuse refers to the process of reusing previously installed laminate flooring elsewhere after it has been removed or dismantled. This approach aims to conserve resources, reduce waste and reduce environmental impact by reusing existing materials.

2. Advantages of Laminate Flooring versus other Flooring Systems

Durability: Laminate flooring is known for its robustness, resisting scratches, stains, and fading, which enhances its lifespan and suitability for reuse.

Ease of Installation and Removal: Laminate floors often feature click-lock systems, facilitating straightforward installation and disassembly without the need for specialized tools or adhesives.

3. Best-Practice Cases of Laminate Flooring Reuse

Several examples illustrate the implementation of laminate flooring reuse:

Community centers: Laminate flooring reclaimed from commercial spaces or residential buildings can be repurposed in community centers or charitable organizations, providing durable and attractive flooring solutions for low-budget projects.

Products from fairs and demolition: Laminate flooring salvaged from exhibitions or demolished structures can find new life in different environments, contributing to sustainability efforts by preventing waste.

Second-hand shops and charity: Establishments like second-hand shops or online platforms such as eBay Kleinanzeigen provide avenues for individuals and organizations to sell or donate used laminate flooring, allowing others to benefit from its durability and aesthetic appeal at a lower cost.

4. Reinstallation Process

Reinstalling laminate flooring for reuse involves several steps, depending on the click system used:

Disassembly: Carefully remove the laminate flooring elements by disengaging the click-lock connections, taking care to avoid damage during removal. Avoid damages of the edges of the mechanical connection systems during transport to the next installation.

Cleaning and Sorting: Thoroughly clean and inspect each element for any signs of wear or damage. Repair or replace damaged sections as necessary to ensure the integrity of the flooring.

Reinstallation: Install the laminate flooring in the desired location, following the manufacturer's instructions for the specific click system used. In cases where individual elements are damaged beyond repair, adhesive can be used to secure replacement parts, ensuring a seamless finish.

In conclusion, the reuse of laminate flooring offers significant environmental and economic benefits, supported by its durability, ease of installation, and suitability for various settings. By adopting best practices and leveraging available resources, individuals and organizations can contribute to sustainability efforts while enjoying the practical advantages of laminate flooring reuse.

Underlays can be reused if they have no damages.

R4 Repair

Repair and maintenance of laminate floor coverings will be carried out on damaged and broken products, e.g. single elements, which stay in its original installation.

Several possible situations will be described as follows:

1. Partly repair of local scratches and indentation by repair set

In principle, this type of repair is only suitable for minor damage. In the event of major damage, we recommend replacing the floorboards as described in Section 2.

To repair surface defects on laminate flooring, you can follow the following steps:

Cleaning: Start by thoroughly cleaning the damaged area to remove dirt, dust, and other debris.

Filler: Use a laminate repair pen or filler to fill small scratches or holes. Apply the filler according to the manufacturer's instructions and allow to dry.

Color Matching: If necessary, you can color the repaired area with a matching paint pen or paint marker to match the color of the laminate flooring.

Sealing: Finally, you can coat the repaired area with a clear laminate sealant to protect the repair and even the surface.

Make sure you follow the products' instructions carefully and test the repair on an inconspicuous area to ensure the result is satisfactory.

Examples for technical solutions are from Dr. Schutz (Protection Scratchfix Floor Repair Set) or from company Heinrich König (hard wax) or others. Their recommendations for use are to be taken into consideration.

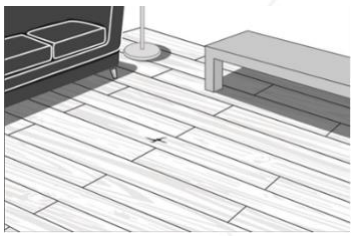
2. Replacement of single elements

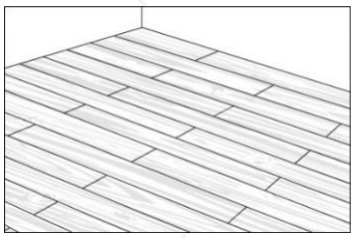
Several mechanical connection systems of different producers are available. In the following section a specific example is described. Other procedures are available e.g. with other short side connection systems or herringbone installation.

Alternatively, a generally valid manufacturer's instruction guideline has to be considered.

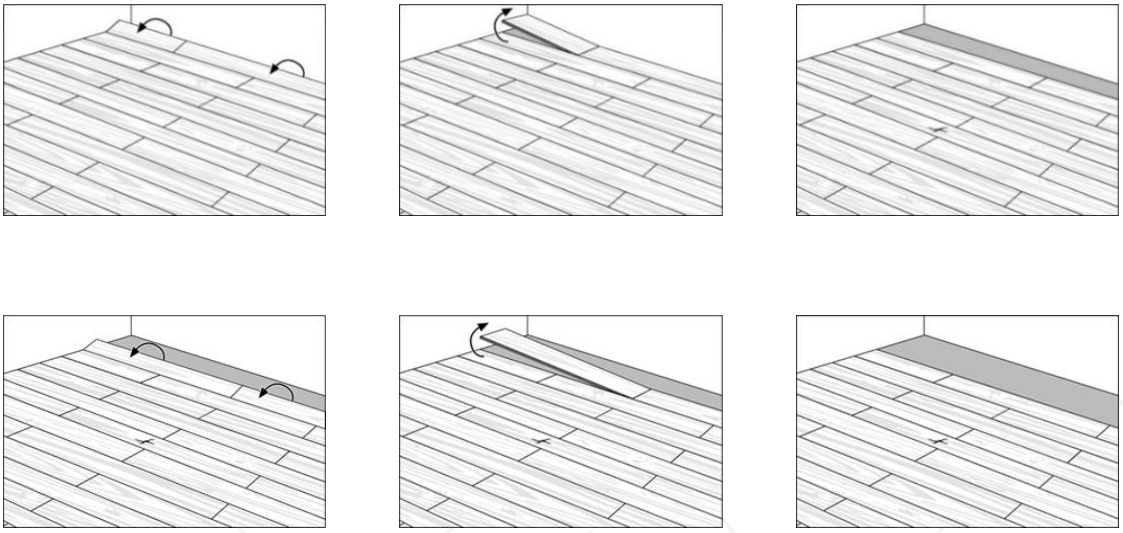
2.1 Replacement by removing a partial area

If the furniture allows it, the floating flooring is removed in rows starting from the nearest wall and until the damaged flooring element is reached. Given that the locking system also allows the flooring elements to be installed backwards, they can also be dismantled / removed from the side of the room where the installation was started.





After removing the skirtings, the complete row is lifted and angled out lengthwise. Then the individual head sides are separated by angling. It is advisable to store the removed elements in rows, which makes it easier to reinstall them later. After the damaged element has been replaced, the flooring surface is completed again (according to the installation instructions).



2.2 Replacement of a single element in the surface

If, due to the furniture or other circumstances, replacement by removing a partial area is not possible and/or appropriate, a single element in the area (surface) can be replaced as described below.

Experience shows that new work processes do not always run smoothly. It is therefore advisable to carry out the first replacement of floorboards as an exercise in your workshop.

2.3 What do you need for the floorboard replacement?

2.3.1. Replacement element

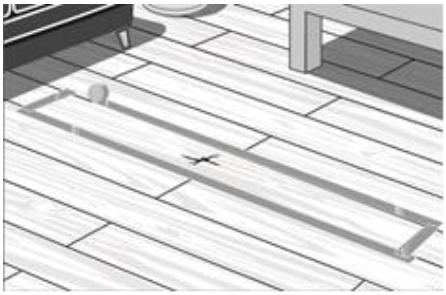
You will need a replacement element from the production batch original installed. It is absolutely necessary to store and acclimatize the replacement elements unpacked for one week in the room where the floorboards are replaced, in order to achieve the necessary dimensional equalization between the installed floor and the replacement element.

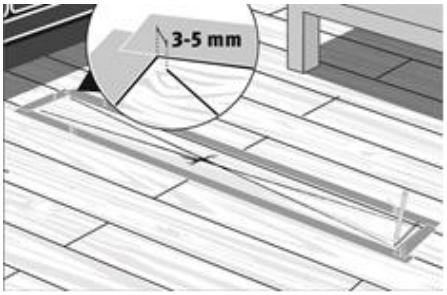
2.3.2. Tools

Tools as recommended by the producer are to be used.

2.4 Marking the cuts

Mark the damaged element by marking the cutting pattern, which ends in the corner areas with a distance of 3 mm to 5 mm to the edge of the floorboard (see diagram on the right). Stick the adjoining flooring elements with masking tape in the edge area (see diagram on the left). This protects the edge areas and helps to visually limit the floorboard dimensions.



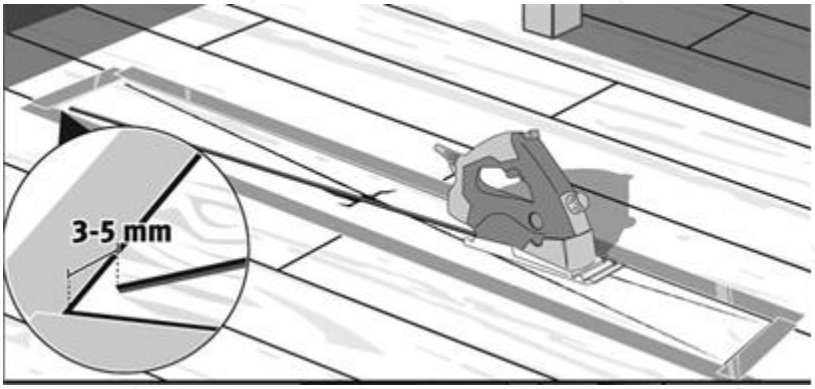


2.5 Sawing

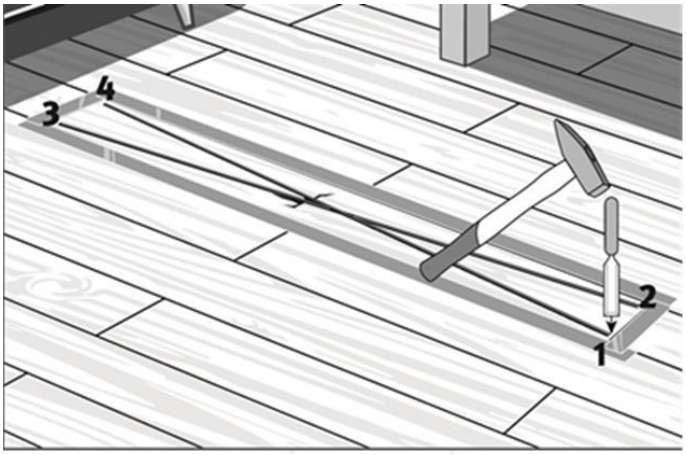
Before you start,

- adjust the exact cutting depth of the plunge saw (see diagram: depth of cut = element thickness + height of the guide rail) to prevent damage to the underlay materials. If the insulation underlay is damaged, repair it with the vapour-proof adhesive tape.
- Connect the vacuum cleaner to the saw.
- You can also drill small holes in the 4 corner areas to protect the edges.

Cut the element which must be replaced into 4 sections with 2 diagonal cuts along the drawn cutting pattern (see diagram), ending with the cut 3 mm to 5 mm before the floorboard edge.

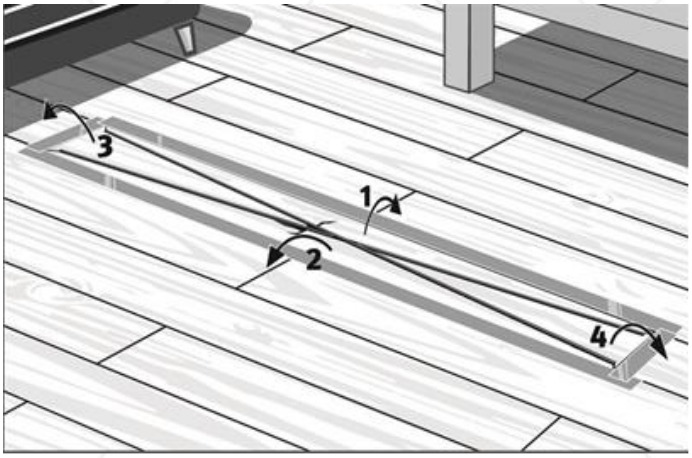


Carefully cut through the last millimetres of the remaining board in the corner area with a chisel, working away from the edge of the board to avoid damaging the adjacent elements.



2.6 Removal of the element

Now carefully lift the 4 pieces in the given order (see diagram) and angle them out.

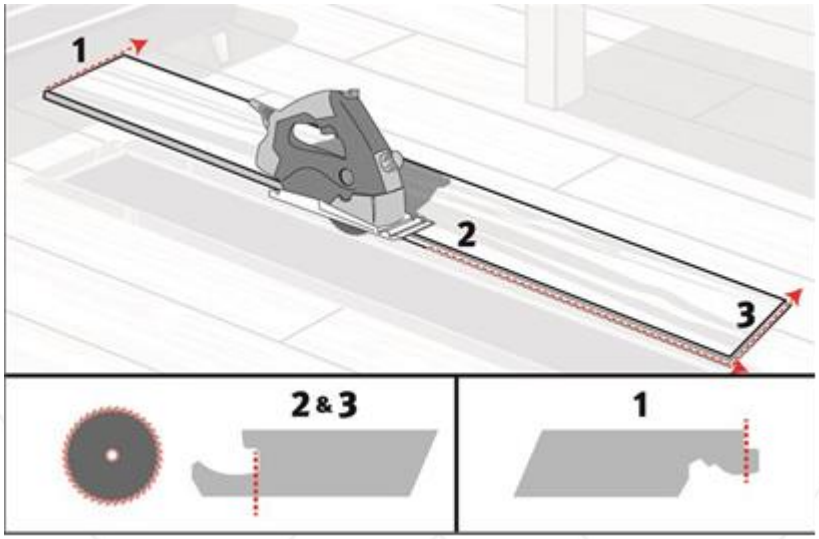


2.7 Cleaning

For a perfect fit (without height offset), a thorough cleaning with a vacuum cleaner of the surrounding tongue and groove areas and the subfloor is necessary, thus easily removing all remaining parts / dirt particles.

2.8 Prepare replacement element*

On the replacement element, undercut the longitudinal and head-side convex groove down to the bottom of the groove (see diagram no. 2 & 3) and cut off the head-side tongue flush (see diagram no. 1). Make sure that you set the saw to the correct cutting depth here too.



**This step is an example for a specific connection system, the procedure for other systems can differ.*

2.9 Checking the fit

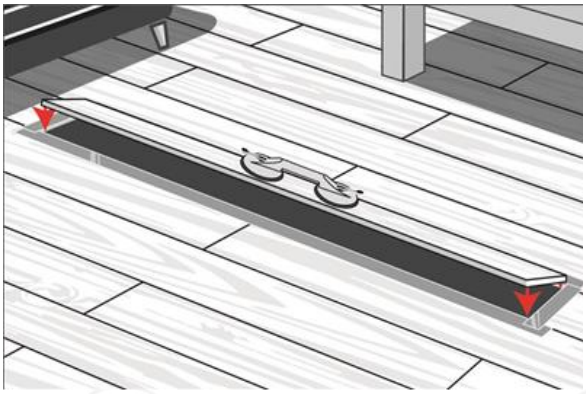
To check whether the replacement element fits, proceed as follows:

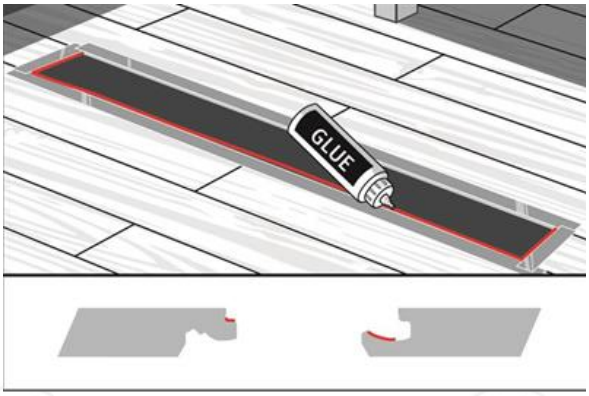
1. Do not apply any adhesive (glue) yet.
2. Attach the glass lifter to the replacement element and lock the long side of the element by inserting it with the tongue side diagonally from above into the longitudinal groove of the adjacent element and engaging it by lowering it (see diagram).
3. Now check the accuracy of fit and remove the element with the glass suction cup.
4. It may be necessary to slightly rework the replacement element. Since this usually only involves 1/10 of a millimetre, in most cases it is sufficient to touch up with 100-grit sanding paper.

2.10 Gluing and installation

2.10.1. Gluing

As the click connection of the replacement element has been reworked as described in point 2.6. (groove crosswise & lengthwise and tongue crosswise), the replacement element must be "glued in" in the modified connection areas. A D3 wood glue (PVAC) must be used for this purpose. Apply the white glue in measured doses and in targeted quantities on the top of the tongue and in the grooves of the adjacent flooring elements (see diagram).

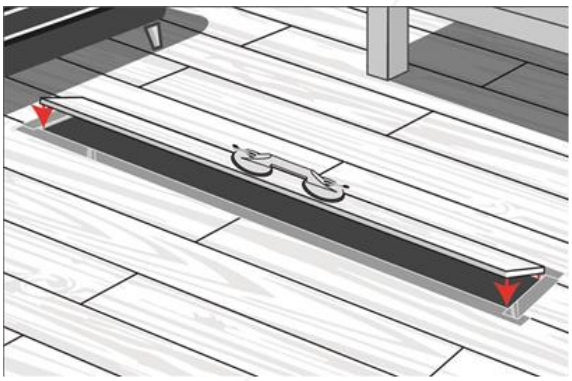


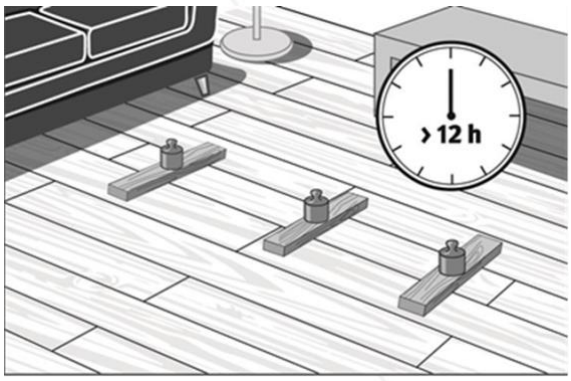


2.10.2. Installation

Now insert the replacement element as described in point 2.7. and check the fitting accuracy again.

Then weigh down the newly inserted flooring element for at least 12 hours (e.g. with books, toolboxes) so that the glue can harden. It is recommended not to load / walk on the repaired area during this time.





Remove excess adhesive in a timely manner (according to the manufacturer's instructions) with a damp cloth. If there are still minor joints after cleaning, fill them with a repair set which match the colour.

3. Maintenance process

What does this mean for laminate flooring?

Laminate is not a technical device, nor does it have a surface that absorbs care products to enable an extension of its lifespan. The floor certainly cannot be sanded down and resealed. Therefore, the most important thing is that the floor is not overused and is cleaned as well

as possible when using the product. There is a risk of damage if cleaning is done with cleaning agents that are too aggressive or too wet. Details are described in the Technical Bulletins Cleaning (Professionals) and Cleaning (Home) of the EPLF; see: https://eplf.com/en/information-material.

R5 Refurbish

Refurbishment is the restoration and update of old products of existing installations.

In order to generally extend the useful life of installed laminate floor covering, the aspect of refurbishment of the installed floor covering could also be considered.

Slight signs of wear such as superficial scratches, even across elements, are common after a longer period of use and could be extensively refurbished, whereas, for example, raised edges on the long and cross sides of the individual elements indicate permanent damage.

In this case, extensive refurbishment would be advisable against unless the massively damaged individual elements are replaced in advance, as described in R4.

Products available on the market for refurbishing by sealing the entire area are currently based on PU with a crosslinker as a two-component variant but are expensive and only approved for professional use.

It should be noted that the overall appearance and usage characteristics of the refurbished area could be changed by the application.

R6 Remanufacture

Remanufacturing is, that an existing old product, which has been installed at least once will be in parts or in total part of a transformation process at a manufacturing plant which gives finally a flooring product with qualified product performance again for the declared use.

Laminate floor coverings are showing an abrasive resistance top layer, a HDF core and a backer. Laminate floor coverings are always installed by a floating installation method, meaning the products are not glued to the substrate. Thanks to the glue free click joint connection, the floor could be de-installed without major damage.

Remanufacturing could be done by using the existing product build up and the installation of a new abrasive resistance top layer, either by using digital printing technology or prefinished abrasive resistance decorative flooring foils or any other Material, top layer, usable as flooring surface. Finally, the product will be profiled with a new tongue and groove system, packaged, and send out for a new installation for the intended use.

This technical solution could be modified in detail but is based on the concept that the existing old laminate flooring product is used as a base- core for a new flooring panel. To do so, the

structural substance/ quality of the existing old laminate core needs to fulfil minimum requirements of given parameters in EN 13329.

This technical solution is theoretically working but not seen yet as business model for laminate flooring. As long as the material value is (too) low for thin laminates (≤ 10mm), the industrial effort for remanufacturing of a laminate at least for most of the European countries is too high. Economic and ecological efficiency is not given at the moment.

For small size manufacturing with special top layer technology, designed for application on modular single panels, remanufacturing of laminate panels might be a chance to replace the use of new core materials.

Availability, selection of existing panels in terms of panel dimension and thickness has to be in line with corresponding material flows.

R7 Repurpose

Repurpose is the use of parts of an old product in a new product with a different function.

For laminate floorings, no frequent commercial use in the meaning of repurpose is known.

Due to their low thickness, good mechanical properties and good machinability, it is however conceivable that old panels could be used as packaging or protective material or for the construction of customised small pieces of furniture.

Also, old underlays can be used for packaging and protecting purposes.

R8 Recycle

Recycling means the reuse of the raw material from pre- or postconsumer elements or parts from laminate floor coverings. it means the processing of waste materials for the original purpose or for other purposes, excluding energy recover.

1. General description how to use this term of recycling for laminate floor coverings

a. When to recycle laminate flooring?

- Recycling should be initiated when the previous R-strategies cannot be applied in good conditions (no more repair is possible, …).
- Recycling should occur before Energy recovery.

b. Why recycle laminate flooring?

- The wood-processing industry is increasingly using recycled wood. The Particle board industry already uses 95% of recycled wood. But the amount of recycled wood is not infinite. That's why it's important to think about the future. By recycling laminate flooring, we are using an additional source of wood fibers as raw material. An important step for the Circular economy.
- Wood Stores CO2 and holds it for its entire lifespan. By recycling laminate flooring, the wood fibers are reused, and the CO2 remains in the flooring that stores it for a longer period. In other words, you give wood fibers a new material application and thus keep them in the building chain longer.
- There are processes available to recycle laminate flooring and to use the recycled fibres in a new production of substrates for laminate flooring without any loss of quality.

c. How to contribute to recycling laminate flooring?

- It is important to bring the laminate flooring back to collection point which could differ from country to country (municipal or private container park, dealer, installer, …).
- Damaged and smaller pieces of planks / tiles can also be recycled.
- Separated collection will facilitate recycling because sorting operations would be avoided. If possible:
  - do not mix HDF with particle board or with solid wood if possible
  - do not mix laminate flooring with other flooring type
  - do not mix laminate flooring with plastic-based underlay
- If laminate flooring is mixed, it will need to be sorted out and may be grouped with furniture wastes of MDF because the recycling process will be the same.

d. Advantages of Laminate flooring type related to this Recycling strategy

- floating and glue-less installation makes the removal at End of Life easier and with limited contamination of the Laminate flooring elements.

2. Description of details or examples as best practice cases to recycle laminate flooring

What is the challenge with the laminate flooring recycling? The wood fibers are glued and therefore not reusable unless by breaking the chemical bonding between them.

For a long time, it was impossible to recycle the millions of laminate flooring m² produced annually on an industrial scale. They were resolutely landfilled or burned at the end of their lives.

Now, for example the EPLF member Unilin has developed a unique technology to recover MDF and HDF wood-fibres and reuse them for new boards and for new flooring. What does that mean in concrete terms? A massive amount of unused raw materials can be reused.

The process of recycling laminate flooring can best be compared to the transformations in a pressure cooker. First, the shredded laminate flooring panels are moistened with steam. Then they are heated and put under very high pressure. Finally, the pressure is reduced, causing the fibres to loosen. Recycled wood fibres can be introduced in the production process of MDF/HDF without preliminarily being dried.

The quality of the new laminate flooring containing recycled fibres is not downgraded compared to initial quality and is even improved for water resistance. Emissions of the new floor containing recycled fibres are on the same level as a floor made of virgin wood fibres.

What are the limitations?

- Sor far the recycling yield is depending on the glue type and the glue amount used in the laminate flooring but all laminate flooring is recyclable.
- So far, the surface and the backer are not recycled except for energy recovery.

3. Underlays

If it is not possible to reuse, repair or repurpose underlays, they can be recycled and the points above are also valid. Underlays should not be mixed with the floor covering and brought separately to the collection point.

R9 Recover

Recover means the energetic utilization of waste from Laminate Floor coverings. It represents the lowest level of R-strategies as it is not really part of a circular approach. But energetic utilization of Laminate Flooring nevertheless can be a good solution. As the absolute main component of the product is wood, which is a renewable resource and a carbon sink, the CO_2 release from fossil sources is comparably low. And the heat value of the product is also good.

In general Energy recovery is preferable in comparison to other non-circular end-of-life scenarios like landfill.

Provisional note:

All processing instructions and explanations were prepared based on the best available information and with due diligence. The information provided is based on practical experience and reflects the current level of knowledge. It is intended for information only and does not constitute a guarantee in terms of product properties or suitability for specific applications. EPLF accepts no liability for any mistakes, errors in standards, or printing errors. In addition, technical changes may result from the further development of laminate floor coverings, equipment and different technologies e.g. for recycling as well as changes to standards and public law documents. Therefore, the content of these processing instructions and explanations cannot serve as a legally binding basis. The instructions of laminate floor covering producers have to be considered.

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