

GUIDE TO SUSTAINABLE AND ECO- FRIENDLY FLOORING SOLUTIONS



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Abstract

The "Guide to Sustainable and Eco-Friendly Flooring Solutions" explores the growing importance of eco-conscious choices in the flooring industry. With increasing awareness of environmental impact, more homeowners and businesses are turning to sustainable alternatives that not only reduce carbon footprints but also contribute to healthier indoor spaces.

This guide delves into various sustainable flooring materials, such as bamboo, cork, and reclaimed wood, explaining their environmental benefits and suitability for different spaces. It also provides insights into the durability, cost-effectiveness, and aesthetic appeal of eco-friendly flooring options.

Additionally, the guide highlights the significance of using non-toxic materials and how these choices positively affect air quality. Whether you're renovating a home or planning a new project, this guide equips you with the knowledge to make informed, environmentally responsible flooring decisions, ensuring a sustainable and stylish foundation for any space.

Getting Started

When embarking on a flooring project with sustainability in mind, the first step is understanding your options. Sustainable flooring materials range from renewable resources like bamboo and cork to reclaimed wood and natural stone, each with its unique advantages. Start by assessing your needs: consider the function of the space, your aesthetic preferences, and the long-term durability required.

Next, research the environmental impact of different materials. Look for certifications such as FSC (Forest Stewardship Council) for wood products or Greenguard for low-emission materials. These certifications ensure that the materials meet stringent environmental and health standards.

Additionally, think about the installation process and the lifecycle of the flooring material, including whether it can be recycled or repurposed when its life comes to an end. Once you have a clear understanding of sustainable flooring options and their benefits, you can confidently choose the best solution for your project.

1. What Is Sustainable Flooring and Why Is It Important?

Whether your next project is a home renovation, a new school design, or a commercial or hospital remodel, sustainable flooring can elevate the space.

As the demand for eco-friendly flooring solutions increases, it's important to understand your options. "Global flooring and carpet sales will grow at a healthy CAGR of over 5% through 2031, despite a period of muted growth in 2020," according to a study by Future Market Insights.

The study reveals that sustainability has become more important to consumers. Sustainability is an irrefutably significant thought for designers and architects, as well as the customers they design for. Due to the waste that's produced when installing flooring and carpet, choosing flooring responsibly is key.



Hardwood, porcelain, rubber, and even carpet can all be sustainable. This guide to sustainable flooring includes the many sustainable options and how you might use them.

What is Sustainable Flooring?

Sustainable flooring is any type of flooring that is produced using natural, low-carbon, and/or recycled materials and that has a low environmental impact over the course of its lifespan. In practice this starts with how the flooring's materials are collected and ends with how the material is disposed of.

Sustainable flooring should use renewable materials capable of being harvested with minimal emissions and that can be easily recycled, repurposed, or are biodegradable.

It's also important to consider the manufacturing process behind a product when evaluating if it's truly sustainable. Does the manufacturer source their materials ethically? Do they recycle waste of the products they make? Do they use renewable energy to produce those products? These are the things to consider when deciding whether or not a flooring can actually be described as sustainable.

Types of Sustainable Flooring

When people hear the words “sustainable flooring,” they typically envision one of two materials: timber or stone—and while it’s true that these (alongside dirt) are some of the oldest options, they are by no means the only choices when it comes to sustainable flooring.

Hardwood

Hardwood is a natural material that supports a circular economy. A circular economy means designing to reduce waste by elongating the life of existing products and materials. Wood is an ideal choice for a circular economy because it can easily be reused and recycled at the end of its life in a given built environment. Recycled hardwood flooring is just one example of this.

Sustainably speaking, refinishing hardwood flooring surfaces can reduce the carbon footprint by more than 75% compared to floor replacement, according to a recent report from Bona.

The global hardwood flooring market is expected to reach \$61.78 billion by 2028 and register a revenue CAGR of 4.3% over the forecast period, according to the latest report by Reports and Data.

Responsible sourcing and manufacturing can be seen across the hardwood flooring industry. Delta Millworks is one hardwood manufacturer that is taking sustainable sourcing seriously. “We source sustainable wood out of tree farms in New Zealand or British Columbia, where they’re pulling out less than 1% of the standing trees every year and then regrowing them, so most forests there are expanding,” Robbie Davis, Delta Millworks CEO, previously told gb&d. “We don’t touch tropical hardwoods coming out of the Brazilian rainforest. And there’s still some clear-cutting going on in Asia and Africa and other parts of the world, so we avoid those, too. Frankly, we think modified woods like Accoya, our most popular product, outperform them. It’s Radiata pine that takes about 28 years before it’s ready for harvest.”

Pros of Hardwood Flooring

- Varied design options. Due to the fact that it is available in a multitude of species, varnishes, stains, and grains, hardwood flooring is a timeless design option that is capable of complementing just about any architectural style.
- Easy to install. Compared to something like polished concrete or stone, hardwood flooring is fairly simple and quick to install, which helps reduce overall construction time and emissions.
- Durable. While it may not be as durable as, say, porcelain tile, hardwood is nevertheless a strong, sturdy material that can last for well over fifty years with proper maintenance and semi-regular refinishing.

Cons of Hardwood Flooring

- Water damage. If there’s one thing hardwood won’t stand up to, it’s water; due to its porous nature, hardwood soaks up any water that spills or leaks in, which can lead to staining, warping, buckling, and even rot.

- Susceptible to termites. As is the case for most non-engineered wood products, hardwood flooring is susceptible to attacks by termites; if the damages incurred are severe enough, they can jeopardize the structural integrity of the flooring.
- Can be expensive. On average, hardwood floors cost between \$6 and \$18 per square foot to purchase and install, which is pricier than, say, laminate or vinyl; exotic wood species and certain grain patterns can further increase the overall expense.

Eco-Friendly Carpet



Carpets hold a 60% share of the US flooring market, with 19 billion square feet sold per year. The EPA estimates that about 5 billion pounds of carpet are discarded in landfills in the US every year. Most carpets are made primarily from finite resources in the form of oil-based plastics that could be recycled.

Carpet is known to be primarily made from oil-based plastics, but not all carpet has to be made this way. One way you can make more sustainable choices when it comes to carpet is by making sure existing carpet is recyclable.

At Aquafil USA, old carpets are collected and disassembled to create ECONYL® regenerated nylon fibers and pellets. "ECONYL is made from 100% waste instead of oil. For every 10,000 tons of ECONYL raw material, 70,000 barrels of crude oil are saved, and 65,100 tons of CO2 equivalent emissions are avoided. Using ECONYL yarn offers up to 90% reduction in global warming potential compared to nylon from fossil sources," Franco Rossi, president of Aquafil USA, previously wrote for gb&d.

This material is then used by more than 2,000 brands around the world to create the next generation of sustainable carpets as well as clothing, chairs, handbags, sneakers, sunglasses, and tables.

Pros of Eco-Friendly Carpet

- Energy-efficient. Due to their thickness and insulating qualities, carpeted floors can help keep buildings warmer in cold weather, which helps reduce heating loads and improves energy efficiency.
- Comfortable. Carpeted floors are one of the more comfortable flooring options out there, both in terms of walking on and in the sense that they often make a room more inviting.
- Sound-dampening. As a soft material, carpet helps absorb and dampen sound—a feature that may be ideal in shared apartment spaces and large residential complexes where voices, music, and footsteps are commonplace.

Cons of Eco-Friendly Carpet

- High maintenance. As with any carpet or rug, eco-friendly carpets require more maintenance and cleaning than other types of flooring; they require frequent vacuuming to remove trapped dirt and regular professional cleaning to remove embedded dirt.
- Shorter lifespan. Even high-quality carpet made from natural and recycled materials has a much shorter lifespan (between 5 and 20 years) than most other types of flooring materials, which means it will need to be replaced more frequently.
- Retains moisture. Unless you install wool carpet or some other moisture-resistant carpet type, your carpeted floors won't be able to handle spills or leaks well, as carpet easily retains moisture; if left unchecked, this can lead to mold/mildew growth or rotting below the carpet.

Recycled Rubber

Rubber ranks as a sustainable material for flooring because of its durability, capacity to be recycled, and low maintenance. Rubber is an ideal flooring option for high traffic buildings such as schools and health care facilities. Adding recycled rubber flooring to these types of projects helps bring public spaces one step closer to sustainability.

Made of 100% post-consumer tire and post-industrial EPDM rubber, REGUPOL Revolution is inherently slip-resistant, durable, and comfortable underfoot. This rubber flooring is ideal for schools and hospitals because of its noise reducing capabilities. "Commercial rubber flooring like Revolution is known for its sound-absorbent qualities and proven effectiveness in minimizing sounds associated with echoes in the hallway and heavy foot traffic to a more tolerable, less distracting level," Wil Younger, marketing manager at REGUPOL, previously told gb&d.

REGUPOL's products can also help architects and designers earn points in two out of five LEED categories—Materials and Resources and Indoor Environmental Quality.

Pros of Recycled Rubber Flooring

- Slip resistant. Rubber has a naturally high coefficient of friction, which means it provides excellent traction and is fairly slip-resistant, reducing the probability of falls and other potentially dangerous accidents.
- Absorbs impact. Due to its elastic molecular structure, rubber flooring is exceptionally good at absorbing impacts without damage, making it ideal for gyms and high foot traffic areas.
- Incredibly durable. Thanks to its natural elasticity and shock-absorbing qualities, rubber flooring is incredibly resilient and capable of withstanding heavy foot traffic; on average, you can expect rubber floors to last between 20 and 50 years.

Cons of Recycled Rubber Flooring



- Strong smell. Depending on the flooring, some rubber floors may give off a strong scent that some people find undesirable; the rubber smell tends to dissipate over time but can make rubber flooring an unwanted option for smaller enclosed spaces.
- May fade over time. While some rubber flooring can be made UV-resistant, many recycled rubber floors lack this quality, which can lead to fading and loss of color over time.
- Can be difficult to install. Before rubber flooring can be installed, the subfloor needs to be prepared properly to ensure the correct adhesive is used to counteract any existing slab moisture; this means rubber flooring always requires experienced professionals to install.

Luxury Vinyl Tile

Luxury vinyl tile (LVT) is a type of flooring designed to realistically mimic the appearance of stone, wood, marble, or other natural materials. It is an ideal flooring option for those who want

the look of natural materials but don't want the high upfront costs or maintenance requirements that typically come with said materials.

“Especially for a building owner, LVT is a very easy product to put in because of its low maintenance. And it's hard to damage,” Sean Brennan, US president of Kährs, told gb&d in a previous article. “It's a good alternative to carpet. It's easier to clean, it has some water-resistant features, and can be less expensive than other flooring alternatives.”

Founded in Sweden, Kährs is a leading manufacturer of engineered floors, offering a range of solutions for projects that need wood, resilient, and LVT flooring for both the commercial and residential markets. Kährs' LVTs are all phthalate free and are offered with the option of glue-free click joints, a feature that streamlines installation and reduces VOC emissions. Metroflor is another well-known manufacturer of low-toxicity, durable, and environmentally conscious LVT flooring solutions. Metroflor is one part of HMTX Industries, a global LVT manufacturer that's hyper-focused on material transparency, carbon reduction, and water/energy conservation.

HMTX envisions their business model through three distinct pillars, which include design excellence, supply chain superiority, and sustainability, transparency, innovation, and quality. “We believe that resonates with the design community. We believe that resonates with millennial shoppers. And we believe sustainability and transparency leads to good quality and the ability to be innovative,” Harlan Stone, CEO of HMTX, previously told gb&d.

Pros of LVT

- Lightweight. LVT is a very lightweight product, a quality that makes it easy to handle and install.
- Low-maintenance. Once installed LVT flooring requires very little maintenance, necessitating only occasional sweeping/vacuuming and mopping.
- Water resistant. As a vinyl-based product, LVT is naturally water resistant and therefore essentially immune to moisture damage; this makes LVT an ideal flooring option for bathrooms.

Cons of LVT

- Can be scratched and dented. Despite having a fairly high durability, LVT is still susceptible to denting from heavy furniture and can be scratched or pierced by sharp objects.
- Difficult to remove. LVT flooring that is installed using glue-down or other adhesive-based methods can be difficult to remove later on.
- Discoloration. Most LVT flooring has a low tolerance for UV rays and is prone to fading/discoloration when regularly exposed to sunlight.

The Future of Sustainable Flooring



As more and more designers, architects, developers, and customers come to appreciate the benefits—and sheer necessity—of building sustainably, sustainable flooring options will only become more creative and varied.

HempWood flooring, for example, is a new alternative to wood flooring that uses compressed hemp fibers, FSC-certified plywood, and a soy-based adhesive to create strong, durable planks comparable in hardness to most hardwoods. Due to the fact that hemp is a natural material, stores carbon, and is ready to harvest in just six months, HempWood is considered to be a promising, low-impact flooring solution.

In recent years there have also been several advancements when it comes to rammed earth, adobe, and even concrete floors—just two years ago in Switzerland, a new type of concrete flooring that halved the amount of used material and reduced embodied carbon by 80% was developed by Philippe Block, the Block Research Group, and Holcim.

All in all, it's extremely likely that the demand for sustainable flooring will only continue to rise, resulting in an increasingly varied array of recycled, renewable, and non-toxic flooring options.

2. What Are the Different Types of Sustainable Flooring Materials?

Before any flooring materials were invented, the ground itself served as the floor in buildings – perhaps covered with straw, waste products, or furs. Some cultures used animal blood to harden their dirt floors or mint to deodorize them. Sand floors, by contrast, could be swept out and replaced when they became dirty.

The first materials that could be considered flooring as it is currently thought of were stone and tile. After that, everything from concrete, wood, rag rugs, elaborate mosaics, and Persian carpets to rubber, vinyl, and cork were used on floors. The best floor will reduce a building's environmental impact and toxicity level, and function well for building occupants.

Here's a detailed look at some of the most popular sustainable flooring options, including Amtico flooring:

1. Bamboo Flooring

Bamboo is a top choice for sustainable flooring due to its rapid growth, reaching maturity in just 3-5 years. As a renewable resource, it minimizes deforestation while offering strength and durability comparable to hardwood. Bamboo comes in a variety of finishes and patterns, making it versatile for different interior styles. However, ensure you choose bamboo products made with non-toxic adhesives.

2. Amtico Flooring

Amtico flooring is a type of luxury vinyl tile (LVT) known for its durability and low environmental impact. Amtico uses recycled materials in its production, reducing waste. Additionally, it's designed to be long-lasting, which means fewer replacements and less waste over time. Its water-resistant and scratch-resistant properties make it ideal for high-traffic areas. Amtico's range of stylish designs mimics the appearance of natural materials like wood and stone, providing a sustainable and chic alternative.

❖ How To Clean And Maintain Your Amtico Flooring?

Amtico flooring is substantially easier to maintain than other options like wood flooring. It neither requires frequent refurbishment nor is susceptible to wear and tear.

One of the primary reasons it has become popular over the years is that it is very durable and requires minimal effort to ensure its immaculate look. However, it is still important to give proper care occasionally. Following a few maintenance tips will help homeowners deal with a few problems and keep their Amtico flooring looking as good as new.

One issue often encountered with Amtico floors is that the surface can collect dust and dirt quickly. Another problem most homeowners face is scuff marks and scratches on the surface, making the floor appear dull. This is why professionals who offer [budget vacate cleaning Perth](#)

recommend cleaning the floors frequently using the products and methods suitable for the surface.

Here is how to clean and maintain your Amtico flooring. These easy-to-follow tips will help keep the floors looking pristine.

1. What is Amtico Flooring?



Amtico is a well-known type of vinyl flooring particularly recognised for its durability and strength, which is why many offices and households prefer it. It is made of plasticisers and resin. These things are compressed and heated, leading to a thin, lightweight, and long-lasting product. It provides an excellent finish, just like stone or wood. Amtico also provides an excellent opportunity to create some intricate patterns and motifs that their counterparts cannot mimic. Additionally, it handles heavy furniture and high heels well.

2. How to Clean Amtico Flooring?

Scratches, dents, and spills can happen sometimes through general wear and tear or accidents. Even though the majority of floors just require a quick vacuum mop to eliminate dirt, some extra cleaning power is required to get rid of stubborn stains.

Hiring professionals who do budget vacate cleaning Perth is ideal when you are nearing the end of your tenancy. But for regular cleaning, it is important to learn the best cleaning methods. Here are some specific ways to deal with the common issues:

❖ Remove Dust and Dirt

Regularly sweeping and dusting the floors, ideally a few times a week, is recommended to prevent crumbs and debris from adding up and causing damage to the floor. In high-traffic areas or spaces that are prone to spillages, it is best to mop the floor with whatever mop you have available. It does not have to be microfibre. However, it has to be damp but not dripping wet.

❖ **Get Rid of Stains**

In case your Amtico floors fall victim to scuffs and stains, promptly blot the spills using paper towels. Using any chemical cleaner or even household options like vinegar is considered a DIY cleaning mistake and is not recommended for this flooring material. Instead, apply a stain remover product suitable for Amtico floors. Simply spray the product directly on the stained area and allow it to sit there for a few minutes. Follow up by using a cleaning pad.

❖ **Deep Clean the Floors**

Occasional deep cleaning, when combined with regular dusting, can bring excellent results. To achieve a thorough clean, using a specialist Amtico Floorcare Stripper is recommended by vacate cleaning Perth experts. It will help get rid of any unpleasant build-up of dirt. The surface will return to its original glory. Apply the product and allow it to sit there for about 10 minutes. Follow up by rinsing off.

❖ **Eliminate Scratches from the Surface**

There are two very straightforward options homeowners can utilise if their Amtico flooring is scratched. Either completely replace the affected section or tile so that it matches the proper grain pattern, or just hire a professional to repair the affected spot.

❖ **Remove Paint**

Amtico floors are strong and long-lasting, which means using a scraper is all that is needed to get the paint off the surface. Just apply water and dishwashing liquid before rubbing with a plastic scouring pad.

3. Tips to Maintain Amtico Floors

Besides cleaning the Amtico floors frequently by yourself or by hiring professionals who provide the best vacate cleaning Perth and regular cleaning services, it is vital to take some preventive measures so that the surface stays in perfect condition. Here are some tips to follow:

- Refrain from dragging furniture across the floor, as that can scratch the surface.
- Place protective pads under the heavy furniture.
- Handle any spillages as quickly as possible by wiping the excessive liquid to minimise stains.
- Do not use steam mops because they can cause damage to the floor.
- Place door mats to reduce the chance of dirt and water being walked onto the floor.
- Adopt a no-shoes policy to keep the Amtico looking clean.
- Ensure your vacuum cleaner is suitable for the floor material.
- Always clean using an appropriate Amtico cleaning product.
- Inspect the flooring regularly for any visible signs of wear and tear.
- Address the minor issues early so that they do not become major problems.

Wrapping Up

The best thing about Amtico flooring is that it is much simpler to maintain than some other flooring materials. By utilising the correct cleaning methods and preventive measures, homeowners can make their floors look pristine and visually appealing for years.

3. Cork Flooring



Cork is harvested from the bark of cork oak trees, which regenerate every few years, making it a renewable resource. Cork flooring is soft, hypoallergenic, and resistant to mold and mildew. It provides excellent insulation for sound and temperature, making it energy-efficient. Its natural texture adds warmth to interiors, making it a favorite for eco-conscious homeowners.

4. Reclaimed Wood Flooring

Reclaimed wood is salvaged from old buildings, barns, or factories, giving new life to materials that would otherwise be discarded. This process reduces the demand for new timber and minimizes deforestation. Reclaimed wood offers unique character and charm, with its aged texture and natural imperfections. It's a durable choice that can be refinished multiple times.

5. Linoleum Flooring

Linoleum is made from natural materials like linseed oil, wood flour, and cork dust, making it biodegradable and sustainable. It's a durable option that resists water, stains, and scratches, making it ideal for kitchens and bathrooms. Linoleum comes in a variety of colors and patterns, offering versatility for eco-friendly design.

6. Natural Stone Flooring

Stone flooring, such as slate, granite, or marble, is a durable and timeless option. When sourced locally, it reduces carbon emissions associated with transportation. Natural stone is recyclable, low-maintenance, and adds a sophisticated touch to interiors. Opting for ethically sourced stone ensures a lower environmental impact.

7. Recycled Materials

Flooring made from recycled materials, like rubber (from old tires) or glass (from discarded bottles), is an innovative way to reduce landfill waste. Recycled rubber flooring is durable, slip-resistant, and ideal for gyms or play areas. Recycled glass tiles create unique, colorful designs that stand out in kitchens or bathrooms.

8. Concrete Flooring

Polished concrete is a sustainable choice for modern or industrial-style homes. It's energy-efficient due to its thermal mass, which helps regulate indoor temperatures. Concrete flooring is highly durable, low-maintenance, and customizable with stains or patterns for a stylish finish.

How to Choose

When choosing flooring, first consider the function of each room or area. Then ask: How much traffic is this area expected to have? What is the likelihood that the floor here will be exposed to moisture? Will this room need flooring that can help dampen noise levels? Might any of the occupants of this room have allergies, chemical sensitivities, or asthma? What are likely ways this area will become dirty and how much time and money will be devoted to cleaning and maintaining this floor? Consideration of these various factors helps narrow down flooring options and ensures that the flooring in each area is well-suited to its purpose.

Of course, various owners will prioritize these factors differently, but this list is a good place to start. The best floor will reduce a building's environmental impact and toxicity level, and function well for building occupants.

3. How Do Eco-Friendly Flooring Options Impact the Environment?

Sustainable flooring manufacturer Tarkett has launched its iQ ONE flooring range, which is purpose-designed to improve the air quality and living standards across healthcare, aged-care and education facilities. The range follows the release of the 'Towards Buildings That Thrive' report, which addresses the need for design and construction practices that promote healthier and sustainable commercial spaces — with a focus on indoor air quality.



Commissioned by Tarkett and authored by the Thrive Research Hub at The University of Melbourne, the report found that exposure to volatile organic compounds (VOCs) emitted from building materials such as flooring can result in significant adverse health issues for building occupants and workers. But despite children, elderly and the sick being particularly vulnerable to unhealthy indoor air quality, the facilities used to service this group are held to the same indoor air quality thresholds as commercial offices and warehouses.

“Unhealthy indoor air quality is one of the biggest threats to Australian’s health and wellbeing in the built environment but is often completely taken for granted,” said Ralph Jorissen, managing director of Tarkett Australasia. “So it is more important now than ever that manufacturers take up strategies that promote healthy indoor environments.

“To address the increased pressure on design professionals to build healthier, sustainable indoor environments, the iQ ONE flooring range provides them with a non-PVC and

phthalate-free, low VOC emissions and fully recyclable option that has not yet been seen in this market category.”

The report finds that using sustainable products like Tarkett's iQ ONE will:

- improve human health and wellbeing by providing low levels of VOCs, increasing hygiene, reducing dust levels, increasing thermal comfort and adding visual and acoustic appeal;
- increase resource efficiency of manufacturing by using less water and energy, producing less waste, maximising recycled material content, using renewable resources and designing for re-use and recyclability;
- boost economic benefits through the use of a finish that is easy to clean and maintain and is long-lasting and durable; and
- improve regeneration impact through creating benefit beyond the immediate product to the systems that the product interacts with across its life cycle.

“The report brings to the forefront the urgent need for the sensible use of materials as the exponential growth of extraction of natural resources for building and construction continues,” said Dr Robert Crawford of the Thrive Research Hub. “Companies that put the wellbeing of the earth and the human population at the centre of their practices will be central to the building industry of the future.”

4. What Are the Benefits of Using Recycled Materials in Flooring?

Natural and recycled flooring materials can be as beautiful, comfortable, durable and livable as their more traditional counterparts. And best of all, natural and recycled materials are better for the environment because they're made from clean, renewable sources and reuse materials that otherwise might have been landfilled. Using natural and recycled flooring products results in better indoor air quality because these products have little or no VOC (volatile organic compound) emissions, unlike many traditional types of flooring and their associated binders, adhesives and sealants.

Many green flooring options are available for residential use. Natural products include natural-fiber carpeting, bamboo and cork, and recycled products include carpet tiles, reclaimed wood, terrazzo, and antique brick and stone. Here's a look at each:

Natural-Fiber Carpeting

One category of natural-fiber carpeting is wool-based carpeting. The natural resilience of wool offers durability that exceeds that of most synthetics. It's also naturally water-repellent, a good insulator and highly fire-resistant. A wool-hemp-blend variation offers more mold and mildew resistance, strength, pest resistance and ultraviolet (UV) resistance than wool alone. A potential drawback of wool-based carpeting is that its use is limited to well-ventilated, relatively dry areas of the home. Although wool is water-repellent and wool-hemp somewhat mold- and

mildew-resistant, for best performance these types of materials should not be continually wetted without drying, such as might occur in bathrooms.

Another category of natural-fiber carpeting is grass-based carpeting, which includes jute, sea grass, sisal, linen and coir. Grass-based carpetings derive their strength from the weave and are naturally anti-static. They are also affordable, versatile, easy to install and made from rapidly renewable, sustainable resources. Some materials have limitations on where in the home they can be used. For example, jute deteriorates when consistently exposed to water and sunlight, and sisal has a rough texture and absorbs moisture readily. And sea grass has a bit of an aesthetic limitation in that it can't be dyed.

Bamboo



Bamboo flooring is resilient, termite-resistant and stronger than the strongest hardwoods (red oak, cherry, teak and walnut). And unlike hardwoods, bamboo is a rapidly renewable resource — it's harvestable only four to six years after planting. Bamboo is well-suited to dry as well as humid climates and doesn't crack. Installation is also easy, as most brands fit together with tongue-and-groove construction and quick-set glue. And the cost of bamboo flooring is competitive with hardwood flooring.

The biggest drawback of bamboo flooring is that some poor-quality products are available. To ensure quality, verify that the raw material comes from plantation-managed timber rather than from the wild, and be sure that low-VOC adhesives are used in manufacture and that the

bamboo is dried to a low moisture content to withstand dry and humid conditions. If a finish is pre-applied, be sure it's high-quality and scratch-resistant. Another potential drawback is that some bamboo floorings can't be used over in-floor radiant heat systems.

Cork Parquet or Planks

A natural and renewable resource, cork is harvested from the bark of the cork oak tree, which is native to the Mediterranean coast. A tree must be at least 25 years old before its bark can be harvested; after that, cork can be harvested every eight to 14 years for the life of the tree. Cork has a unique set of properties not found in any other naturally existing material: It's lightweight, mold- and mildew-resistant, fire-resistant, termite-resistant, antimicrobial, impermeable to gas and liquid, and soft and buoyant. Cork also is resilient, so recovery from marks caused by furniture will leave minimal residual indentation. Because it "gives" when compressed, a cork floor provides a comfortable cushion underfoot. Finally, cork is a natural thermal and acoustic insulator, which means rooms with cork flooring are naturally warm and quiet.

A potential drawback of cork flooring is that some types are not recommended for use below grade or over in-floor radiant heat systems.

Recycled Carpet Tiles

Recycled carpet tiles actually are new carpeting tiles manufactured by grinding up used vinyl and nylon carpeting. In some brands, the actual loop itself as well as the backing contain recycled material. This saves materials that would otherwise be landfilled. Some manufacturers offer great design flexibility by allowing customers to mix and match tiles to create custom wall-to-wall carpeting and area rugs. The modular nature of the product also results in less waste from cutting to size, and worn spots can be replaced without replacing the entire carpet. At the end of its usable life, carpet tiles can be recycled and used for new carpeting. Check manufacturer specifications carefully to ensure that the carpeting is made with low-VOC adhesives and backing.

Reclaimed and Salvaged Wood

These unique wood floorings are composed of re-milled lumber from deconstructed buildings and newly milled lumber from standing dead trees that have been salvaged from waterways and urban areas. Reclaimed and salvaged woods help to reuse materials that would have been otherwise incinerated, which contributes to greenhouse gases. Reclaimed and salvaged wood flooring can be a striking addition to a home. Nail holes, streaking and other character marks are typical, giving the wood a rustic look.

Avoid any reclaimed wood that was treated for its previous application. For example, wood that has been painted, glued or coated may contain lead or arsenic-based wood preservatives. Until 2003, arsenic was widely used as a preservative in pressure-treated lumber, and until 1978, lead was widely used as a pigment and drying agent in oil-based paint. Scientific Certification Systems (SCS) has published clear definitions for reclaimed and salvaged wood.

Terrazzo Tiles or Planks



Terrazzo consists of small colored chips of glass, stone, masonry, concrete or tile bound together by an adhesive matrix that's either concrete or epoxy-based. The chips can be virgin materials or, preferably, recycled materials. Both the chips and the matrix come in a wide range of materials and colors that can be used to create a multitude of aesthetic effects. Terrazzo flooring is also durable and lasts 40 years or more, which means low maintenance and replacement costs over time. Terrazzo typically won't chip, stain, burn or support bacterial growth. Terrazzo floors are also easy to maintain, requiring only a damp mop except in high-traffic areas. After their useful life, they can be recycled to create new floors.

A drawback of some terrazzo products that use an epoxy-based matrix is that epoxies frequently contain phenols and xylenes, two VOCs that should be avoided. Epoxy-based terrazzo is available in pre-finished tiles, which most people tolerate well, but poured-in-place epoxy-based terrazzo poses VOC-exposure issues for installers and homeowners before curing.

Antique Brick and Stone

Antique bricks and cobblestones are available to enliven floors, walls, walkways, courtyards and more. The materials are reclaimed from buildings and streets throughout the United States. Antique bricks typically were made from local natural materials, and cobblestones were cut from local stone. Using these repurposed materials adds history, beauty and one-of-a-kind character to a home. In addition, using them saves the resources that would have been needed to manufacture new materials.

A potential drawback of using antique brick or stone is the cost and resources required to transport them from their original site.

5. How Can You Identify Non-Toxic and Safe Flooring Products?

Selecting non-toxic and safe flooring products is essential for creating a healthy indoor environment. Toxic flooring materials can release volatile organic compounds (VOCs) and other harmful substances, negatively affecting air quality and health. Here's how to identify non-toxic and safe flooring options:

1. Check for Low-VOC Certification

- Flooring materials with low-VOC or no-VOC certification are safer for indoor use. VOCs are chemicals released into the air that can cause respiratory issues, allergies, and other health problems. Look for certifications such as:
- Greenguard or Greenguard Gold: Ensures low chemical emissions.
- FloorScore: Verifies indoor air quality compliance for flooring materials.

2. Opt for Natural and Renewable Materials

- Natural flooring options, such as bamboo, cork, and natural stone, are free from synthetic chemicals that may release toxins. For example:
- Bamboo: Renewable, durable, and eco-friendly.
- Cork: Hypoallergenic and mold-resistant.
- Linoleum: Made from natural linseed oil, cork dust, and wood flour, making it biodegradable and non-toxic.

3. Avoid Harmful Adhesives and Sealants

Some flooring requires adhesives or sealants that can emit harmful fumes. Choose products that use:

- Water-based adhesives: They release fewer toxic fumes than solvent-based ones.
- Low-VOC finishes: Ensure that the finishing products used for sealing or coating the floors are non-toxic.
- 4. Look for Certifications on Sustainable Production
- Flooring products certified for sustainable and non-toxic production include:
- FSC (Forest Stewardship Council): Guarantees the wood used is sourced responsibly.
- Cradle to Cradle Certification: Confirms safe, sustainable, and recyclable materials.

5. Prioritize Engineered and Vinyl Flooring Options with Safety Standards

- Engineered wood and vinyl flooring can be safe choices if they comply with safety standards. For example:
- Amtico Flooring: Amtico luxury vinyl tiles (LVT) use non-toxic plasticizers and meet stringent safety standards. They are a durable and stylish option that avoids the harmful chemicals found in lower-quality vinyl products.

6. Avoid PVC and Phthalates



PVC (polyvinyl chloride) and phthalates in some flooring types, such as vinyl, can emit harmful chemicals over time. Choose vinyl flooring explicitly labeled "phthalate-free" or "non-toxic."

7. Use Recycled and Reclaimed Materials

- Recycled and reclaimed flooring materials are often eco-friendly and safe, as they repurpose existing resources instead of introducing new chemicals. Examples include:
- Reclaimed wood flooring.
- Recycled rubber or glass tiles.

Key Considerations for Safe Flooring Choices

- Ask About Emissions: Inquire with manufacturers about emissions testing for their products.
- Choose Pre-finished Flooring: Pre-finished materials are often safer since they are treated off-site, reducing on-site chemical exposure.

- Inspect Warranties and Guarantees: Look for warranties that ensure the flooring meets safety standards.
- By being mindful of certifications, material composition, and emissions standards, you can confidently choose non-toxic flooring that is safe for your family and contributes to a healthy indoor environment.

6. What Are the Cost Considerations When Choosing Sustainable Flooring Solutions?

If you're looking to go green with your flooring, there are many choices available. Most people think of "green" as being made from a natural, renewable substance, but there's more to consider if you really want a floor that's environmentally friendly. These are the factors that affect a flooring material's impact on the environment:

- Ability to be renewed
- Ability to be recycled
- Responsible manufacturing
- Transport distance
- Maintenance
- Life cycle

Choosing sustainable flooring solutions involves weighing several cost factors, from upfront expenses to long-term savings. Here are the key considerations:

Initial Material Costs:

Sustainable flooring materials, like bamboo, cork, or reclaimed wood, often have higher upfront costs compared to traditional flooring. Materials with eco-certifications, such as FSC (Forest Stewardship Council), may be more expensive due to their stringent sustainability standards.

Installation Expenses:

Some eco-friendly materials require specialized installation, which can increase labor costs. For example, reclaimed wood may need additional preparation, while natural stone is heavy and complex to install. However, easier-to-install options like Amtico luxury vinyl tiles can help reduce these costs.

Durability and Longevity:

Sustainable flooring is designed to last longer, minimizing replacement needs. While the upfront investment might be higher, options like bamboo, Amtico, or cork are cost-effective over time due to their resistance to wear and tear.

Maintenance Costs:

Materials like bamboo and Amtico are low-maintenance, reducing cleaning and upkeep expenses. In contrast, natural wood may require periodic refinishing, adding to long-term costs.

Energy Efficiency Benefits:

Flooring with insulating properties, such as cork or carpet tiles, can lower heating and cooling bills, balancing initial investments with long-term savings.

Environmental Incentives:



Some governments offer tax rebates or incentives for choosing eco-friendly materials, potentially offsetting initial costs.

Recycling and Disposal:

Eco-friendly flooring, like reclaimed wood or recycled rubber tiles, is easier to recycle, reducing disposal expenses at the end of its life cycle.

Bottom Line

Sustainable and eco-friendly flooring solutions are not just about creating a beautiful home; they are about making responsible choices that benefit both the environment and your long-term well-being. With options like bamboo, cork, reclaimed wood, and Amtico flooring, you can enjoy durable, stylish, and low-maintenance floors while reducing your ecological footprint.

Understanding material types, non-toxic products, and cost considerations ensures that your

investment is both practical and ethical. By opting for sustainable flooring, you contribute to preserving natural resources, minimizing waste, and fostering healthier living spaces for generations to come.

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