



Technical bulletin :
**The Hidden Truth
Behind Synthetic Floors:
Why Hardwood Is the
Winning Choice for Your
Health and the Planet**

Objective:

This bulletin sheds light on the hidden environmental and health costs of synthetic flooring alternatives, while highlighting the many benefits of real hardwood. By sharing facts, independent studies, and industry benchmarks, we aim to provide clarity for consumers and professionals alike.

At Preverco, certifications like GREENGUARD Gold and our commitment to low-carbon production illustrate how hardwood can combine beauty, durability, and eco-responsibility.





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As sustainability and healthy living environments become top priorities, more and more consumers are seeking flooring solutions that are not only stylish but also responsible. Behind the appealing look of synthetic floors — vinyl, laminate, and other wood-look alternatives — lies a reality with serious environmental and health consequences.

The Environmental and Health Costs of Vinyl and Wood-Look Alternatives

Most synthetic floors are made from PVC (polyvinyl chloride) or high-pressure laminates, both of which depend on non-renewable, fossil fuel-based inputs. According to the Healthy Building Network, the production of PVC emits dioxins, mercury, and phthalates — toxic substances harmful to humans and ecosystems.

Once installed, vinyl floors can also continue to off-gas volatile organic compounds (VOCs) into the home, negatively affecting indoor air quality.

End-of-life issue: Vinyl and laminate are not recyclable in most municipal programs. They typically end up in landfills where they can take hundreds of years to decompose, releasing microplastics and toxic leachates into surrounding soil and water.

Fact: A 2023 study published in Environmental Science & Technology found that vinyl flooring is a significant source of phthalate exposure in children — particularly DEHP and DINP, which are linked to hormone disruption and developmental concerns.





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Hardwood: A Natural, Low-Impact Alternative

Hardwood flooring, whether solid or engineered, offers a completely different environmental profile. It is a renewable material, sourced from responsibly managed forests, and it acts as a carbon sink, storing CO₂ for the lifetime of the product.

- **Low carbon footprint:** Life cycle assessments consistently show that hardwood has a much lower carbon footprint than synthetic alternatives. For example, Preverco's Flex16 platform records a Global Warming Potential of just 16.1 kg CO₂ eq/m² — up to 90% lower than imported vinyl or laminate. PVC produced in China shows emissions up to 180% higher than commonly reported values.
- **Healthier indoor air:** Many manufacturers in the hardwood industry are committed to low emissions, and some, like Preverco, achieve GREENGUARD Gold certification, one of the most stringent standards for indoor air quality.
- **Carbon storage:** The U.S. Forest Service reports that substituting wood for more carbon-intensive materials can reduce emissions by 2–3 tons of CO₂ per ton of wood used.

A Smarter, More Sustainable Choice

Hardwood flooring is not only authentic, durable, and timeless, but also part of a more circular and sustainable model:

- Locally and responsibly sourced raw materials
- Long lifespan (can be sanded, refinished, and maintained over decades)
- Positive contribution to indoor air quality
- Lower overall climate impact compared to synthetic options



« Health and sustainability are synonymous. »

*Rick Fedrizzi
International WELL Building Institute*

Rick Fedrizzi emphasizes that health and sustainability are inseparable — a powerful message to encourage the choice of materials like wood, which are both healthy for indoor environments and sustainable.





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And while the entire hardwood industry is moving toward more sustainable practices, manufacturers like Preverco stand out by combining local production with internationally recognized environmental certifications.

In summary

Choosing hardwood means investing in a floor that is healthier for families, better for the planet, and built to last — without compromise on beauty or performance.



Aspect	Preverco Real Wood Floors	Vinyl & Wood-Look Alternatives
Material Origin	Natural, renewable Canadian wood	Petroleum-based plastics (PVC, composites)
Carbon Footprint (GWP)	Very low (e.g., Flex16: 16.1 kg CO ₂ eq/m ²)	High (up to 90% higher than wood)
Indoor Air Quality	GREENGUARD Gold certified (ultra-low VOCs)	May release VOCs, phthalates, microplastics
Durability & Lifespan	Long-lasting, can be sanded & refinished	Shorter lifespan, prone to damage, difficult repairs
End of Life	Biodegradable, recyclable, or compostable options	Non-recyclable, ends up in landfill for centuries
Environmental Impact	Acts as a carbon sink (stores CO ₂)	Linear, extract-and-discard model, polluting
Aesthetic Value	Authentic, timeless, natural wood beauty	Imitation look, may feel artificial or plastic-like
Made in	Locally in Canada, with controlled supply chain	Often imported from Asia with hidden impacts