

# A SUSTAINABLE MINDSET

Wooden floors with full  
environmental credentials



**JUNCKERS**

Walking on Danish design

[JUNCKERS.CO.UK](http://JUNCKERS.CO.UK)





# DESIGNING WITH A SUSTAINABLE MINDSET

Wood is naturally low in embodied carbon, a renewable resource that does not produce waste or pollution. At Junckers, we are committed to manufacturing solid hardwood flooring that stays true to nature, without adding chemicals or any other materials. Caring for the environment is central to our business, and always has been. As far back as the 1930s when the company was founded, Flemming Juncker replanted trees to ensure forests were thriving - an environmentalist before his time.

As we work towards a net zero carbon future it has never been more important to choose wisely. Specifying a Junckers floor represents one step on the way to net zero carbon buildings. Our aim is to simplify the specification process as far as possible and we have completed EPDs for our floors, adding to the environmental credentials we already have in place.





## QUALITY

Solid wood is just that, nothing but real, natural wood through and through. Every Junckers floorboard is made of strong and durable solid hardwood – there are no layers of inferior quality; there is no glue or chemical substances in the flooring which adversely affect the air quality in a room, no reliance on fossil fuel derived materials.

## SUSTAINABILITY

We strongly believe in sustainability and support initiatives to improve environmental awareness. Complying with environmental legislation and environmental regulations is paramount to our work and we constantly strive to improve. Since 2006, Junckers is CoC-certified (CoC = Chain of Custody) and is, therefore, entitled to sell products that are certified according to the PEFC™ scheme (SA-PEFC/COC-007649), and since 2010, according to the FSC® scheme (SA-COC-007649). and our floors hold EPDs and are BREEAM A+ rated.

We also hold environmental credentials for our manufacturing processes, including ISO 14001. Our environmental practices are subject to external audit.

## A LONG LIFE

With a life span of 60 years plus the life cycle cost of a Junckers solid wood floor is second to none. This means less waste to manage and ultimately, lower demands on natural resources. Hardwood is a natural, biodegradable and recyclable material and it is non-hazardous when disposed of. Most other floor types will not last as long meaning greater pressure on landfill as well as challenges in terms of chemical release during disposal.

## RENEW/REGENERATE/REPLACE

Most other floor finishes will be stripped out and disposed of after 10 years or less. At roughly the same interval, a Junckers floor can be sanded and sealed to give it a new lease of life. Our 22mm thick floors

can be sanded between eight and ten times, which means our floors will comfortably exceed a 60-year lifespan. A Junckers solid wood floor is not a “throw-away” product.

For upgrading existing buildings with an environmentally sound flooring option, we offer a choice of versatile installation methods for refurbishments, including levelling batten systems which allow screeds to be omitted.

## CO<sub>2</sub> NEUTRAL

We manufacture all our floors in our own factory outside Copenhagen. Every part of the tree is used in the production; what is not used for flooring is used to fuel our on-site power station. Surplus energy is sold to the local grid, making Junckers a CO<sub>2</sub> neutral company. We use large sections of wood for our floors, which means less waste, lower energy consumption, minimal use of adhesives and full recycling capabilities as the wood is not contaminated.





# EPD - ENVIRONMENTAL PRODUCT DECLARATION

As more and more buildings are certified according to schemes such as BREEAM, LEED, DGNB and WELL, each product specified for a project is measured in terms of its sustainability credentials. In addition to our PEFC™, FSC® and Indoor Climate Label certification, we have completed EPDs, Environmental Product Declarations for all our floors.

The EPD assesses our manufacturing and material sourcing activities and presents data in relation to environmental impact, resource use, waste categories and output flow. By providing traceability and transparency in demonstrating the sustainability of our wooden floors, we aim to simplify the specification process as much as we can.

The EDP data counts towards BREEAM, LEED and DGNB assessments by providing specifiers with important data pertinent to achieving a building’s sustainability accreditation.

[Our EPD certification](#)

## Flooring materials - how do they measure up?

Material	Embodied carbon kg CO <sub>2</sub> / kg
Timber, general	0.72
Linoleum	1.21
Nylon Carpet, lightweight	6.7
Nylon Carpet, heavy	18.4
Polyurethane	3.76

Source: ICE Carbon Database



# DESIGNING NET ZERO CARBON BUILDINGS WITH JUNCKERS

## LIFETIME LOW EMBODIED CARBON

Solid hardwood floors have low embodied carbon - a perfect choice for meeting net zero whole life carbon targets. Junckers floors are EPD verified in accordance with ISO 14025.

## CORE HEALTH AND WELLBEING

One of the targets set by [RIBA 2030 Climate Challenge](#). Light coloured floor finishes enhance daylighting and reduce overheating. Junckers solid beech, maple and ash floors are light coloured, easy to maintain and long lasting.

## CO<sub>2</sub> NEUTRAL

Junckers factory uses only carbon neutral energy. All electricity is generated from wood waste from floor production.

## AIR QUALITY

Independently measured emission levels under the Danish Indoor Climate Labelling Scheme show Junckers floors to have no detrimental effect upon indoor air quality.











# CASE STUDY

First school in Spain to obtain double sustainability certification

Architects Gradolí & Sanz designed Imagine Montessori School in Paterna, Valencia with a brief to minimise energy use throughout the lifecycle of the building. As a result, the school is the first in Spain to achieve both BREEAM Excellent and GREEN 4 Leaves.

Set within a pine forest, accessed through wooden walkways, the school forms a connection with nature at every level. In classrooms where children access learning zones freely, the use of timber on both walls and floors sustain the relationship with nature and acts as a peaceful, unifying backdrop. Junckers' Oak Variation two-strip flooring was matched by wood panelling in pine.



The building makes use of building materials with the lowest ecological footprint. The design and carefully selected materials have enabled an energy saving of 70% being achieved compared to similar buildings. Solid wood, a material with a low carbon footprint, is used in the structure of the building, in the roof panel as well as in interior and exterior enclosures. Junckers is CoC-certified (Chain of Custody), entitled to sell products certified according to the PEFCTM scheme [SA-PEFC/ COC-007649], and since 2010 according to the FSC® scheme [SA-COC-007649]. We have completed EPDs which evaluate the environmental impact of our solid hardwood floors to help simplify the selection of floors for a building to be sustainability certified.



<b>Architect</b>	<b>Product</b>
Gradolí & Sanz	Oak Variation two-strip
<b>Location</b>	<b>Finish</b>
Paterna, Valencia	UltraMatt lacquer
<b>Country</b>	<b>Environmental credentials</b>
Spain	BREEAM Excellent Green 4 Leaves



# Q & A

## **Q: Can a Junckers floor contribute towards BREEAM?**

**A:** We've recently completed Environmental Product Declarations for all our floors and are able to provide full data in relation to the environmental impact from cradle to gate – from material sourcing to manufacturing, resource use, waste categories and output flow. The accreditation/data counts towards BREEAM, LEED and DGNB assessments. Our solid wood floors are A+ rated in the BRE Green Guide and have the emission test certificate from the Californian Department for Public Health.

## **Q: How can I reassure my client a Junckers floor is a sustainable choice? What certification do you have available?**

**A:** Providing traceability and transparency to demonstrate sustainability is and has always been central to the way we operate. Always striving to do more and to help simplify the specification process in the quest for net zero carbon buildings, we have completed EPDs for all our flooring products; Since 2006, Junckers is CoC-certified (CoC = Chain of Custody) and is, therefore, entitled to sell products that are certified according to the PEFC™ scheme (SA-PEFC/COC-007649), and since 2010, according to the FSC® scheme (SA-COC-007649). Our floors carry the Danish Indoor Climate Label, have the emission test certificate from the Californian Department for Public Health, and we hold ISO 14001 accreditation for our management systems. In addition, our sports flooring systems are accredited by several sport governing bodies.

## **Q: Why don't you supply engineered wood floors? How do they compare with solid hardwood floors in terms of sustainability?**

**A:** Although some (but by no means all) engineered wood floors are made from sustainable timber, when compared with solid hardwood floors they have significantly more embodied energy and use greater quantities of glue and resins. Engineered boards are made from multiple pieces of wood, all of which have to be cut to size, prepared, dried and assembled into boards, and this uses significantly more energy than a Junckers solid hardwood board, where larger, single pieces of wood are used. Furthermore, a great deal more adhesive is used in engineered boards because the multitude of pieces that make up the board have to be glued together.

Junckers solid hardwood floors have a life span approximately four times longer than engineered wood floors. This means that the total amount of energy used for solid boards is further reduced because you manufacture only one solid floor for every four engineered floors, representing a considerably lower burden upon waste and recycling.

## **Q: I need to specify floors for a dance studio and sports hall. The client has asked for vinyl. You offer both vinyl and solid hardwood - which has the best environmental credentials?**

**A:** All Junckers timber is responsibly sourced. Vinyl (PVC) and other synthetic floors are derived from oil. Junckers is a carbon neutral manufacturer. Oil based materials are known to have a very high carbon footprint.

Another significant difference between the two is their disposal, recycling and potential for re-use. Timber is easy to recycle or dispose of, in fact Junckers whole factory site in Denmark is powered by waste wood. Redundant synthetic floors cannot be recycled and produce toxic substances when incinerated. The only recycling scheme in the UK for vinyl floors is limited to offcuts and ends of rolls of brand new material. The scheme cannot process old floor coverings and so these are sent to landfill or for incineration.

Junckers solid hardwood floors have an exceptionally long life span compared with synthetic floors, due in part to the fact that they can be sanded and resealed so many times. A solid hardwood floor will last about four times longer than a synthetic one, thereby reducing both the amount of embodied energy and the burden upon waste disposal. Hardwood floors, if not worn out, can be lifted and re-used in other buildings as "reclaimed" floors. This is not possible with synthetic floors.

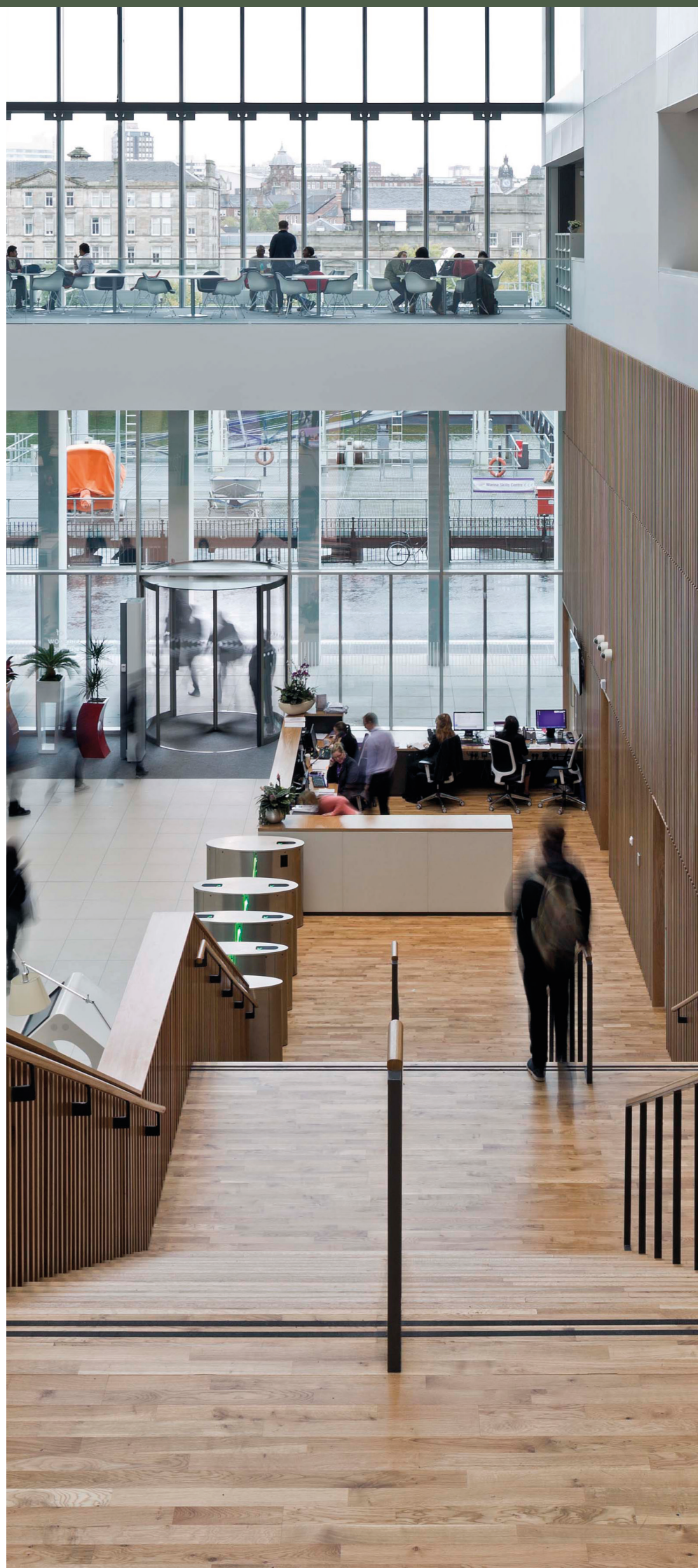


# A WORD ON WOOD

Wood is the world's most environmentally friendly material. Made of sun, air, soil and water, wood is a renewable resource that doesn't produce waste or pollution. Wood can be recycled and saves energy. Wood is what a fossil-free society needs to be built of. Wood is nature's own recycling.

Using wood is good for our climate. The scientific explanation is photosynthesis, which creates the carbon cycle where trees and other plants collect the sun's energy and the CO<sub>2</sub> of the air. Wood stores CO<sub>2</sub> and saves fossil energy. Wood is a material we need more of to create a cleaner and more sustainable world. Wood used as a building material benefits the climate both by storing CO<sub>2</sub> (0.9 tonnes/m<sup>3</sup> of wood) and by saving fossil energy (1.1 tonnes/m<sup>3</sup> of wood) compared to other building materials\*.

*\*Source: trae.dk*







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