

GlobalEPD

A VERIFIED ENVIRONMENTAL DECLARATION



Environmental
Product
de Producto

EN ISO 14025:2010

EN 15804:2012+A2:2020

EN 16485:2014



THE INTERNATIONAL EPD® SYSTEM

GRATO
LIFE UNDER YOUR FEET

AENOR

GRATO parquet

Multilayer wood flooring

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Wood Manners S.L.



The holder of this Declaration is responsible for its content, as well as for keeping the supporting documentation that justifies the data and statements included during the period of validity.



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Estudio de ACV



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AENOR is a founding member of ECO Platform, the European Association of Environmental Product Declaration Verification Programmes

EN 16485:2014 The European Standard EN 15804:2012+A2:2020 serves as the basis	
Independent verification of the declaration and of the data, according to with the Standard EN ISO 14025:2010 ☐ Internal ☒ External	
Verification Agency AENOR Product certification body accredited by ENAC with accreditation No. 1/C-PR468	

1. General information

1.1. The company

WOOD MANNERS S.L. (WM) is a Cantabrian Company located in Torrelavega, dedicated to the manufacture, design and distribution of flooring and wooden solutions for architecture and interior design.

WM sells flooring under the brand name GRATO which is distinguished in the existing market by its highly technological composition and its offer of large formats. It is manufactured in Cantabria according to strict standards and using certified raw materials from sustainable European forests, which ensures a high consistency of the final product, both in appearance and stability over time. The manufacturing system was developed with the aim of having a flexible production line able to produce small or large runs in sizes that are unique in the market: from 1500mm to 4500mm in lengths and widths from 140mm to 450mm. In addition to the flexibility in order volume and sizes, the company has proved to be able to distinguish itself by constantly placing new proposals and ranges of finishes on the market, creating options of colours, varnishes, oils, stains, bevels, types of brushing, etc.

The GRATO brand makes floorings of prestigious architecture and decoration studios a reality, creating unique spaces and atmospheres in large projects: Exhibition centres, residential buildings, shopping centres, offices, restaurants, hotels and showrooms.

International expansion of WM has seen a 50% growth in the past year.

This expansion has been possible thanks to more than 50 projects signed to date. These projects have made it possible for the GRATO brand to be present on the international market, and more specifically on the American market.

WOOD MANNERS S.L. is fully aware of its responsibility to guarantee its contribution to the conservation of forests in particular, and the planet in general. For this reason, the starting point for the manufacture of our products is the use of wood from top quality sustainable forests, working only with suppliers who certify the origin of these certified through the recognition of the P.F.E.C. forest certification system, chain of custody of forest products.

As for the production processes used, they are adapted to a policy of respect for the environment and people's health, being its finishes natural and free of formaldehyde, while optimising the raw material consumed in each one of them, minimising the waste generated and generating energy, in the form of heat, through the combustion of the leftover wood waste, always free of varnishes or patinas. The company's commitment to quality was recognised with the certification of its Management System in accordance with the ISO 9001 standard.

1.2. Scope of the Declaration

This environmental product declaration describes environmental information related to the life cycle of the production of the factory door cradle with modules C1-C4 and D of 1 m² of multilayer wood parquet flooring, tongue and groove on 4 sides, surface finished and manufactured in Torrelavega (Cantabria).

This product is defined under the harmonised UNE EN 14432: 2013 and is suitable for use as indoor flooring including fully enclosed public transit areas.

1.3. Lifecycle and compliance

This EPD has been developed and verified in accordance with UNE-EN ISO 14025:2010 and UNE-EN 15804:2012 +A2:2020 and the following Category Rule:

INFORMATION ON PRODUCT CATEGORY RULES	
Descriptive title	Sawnwood and roundwood. Environmental product declarations. Category rules for timber and timber products for use in construction.
Registration & version code	EN 16485:2014
Date of issue	2014
Conformity	UNE-EN 15804:2012 + A2:2020
Programme Administrator	AENOR

This study is presented under a "cradle to gate" approach (A1-A3) with modules C1-C4 and D, thus considering the stages from raw material extraction to the production of the three-layer flooring, as well as the end-of-life stages and the benefits beyond the product life cycle.

Construction and use processes are outside the scope of this EPD (modules B1-B7).

This EPD may not be comparable with those developed in other programmes or according to different reference documents, in particular it may not be comparable with EPDs not developed according to UNE-EN 15804+A2:2020.

In addition, EPDs may not be comparable if the origin of the data is different, not all relevant information modules are included or if they are not based on the same scenarios.

The comparison of construction products must be made on the same function, applying the same functional unit and at the level of the building (or architectural or engineering work), i.e., including the performance of the product throughout its life cycle functional unit and at the level of the building (or architectural or engineering work), i.e. including the performance of the product throughout its life cycle, as well as the specifications of section 6.7.2 of UNE-EN ISO 14025.

This Environmental Statement includes the following life cycle stages:

System limits. information modules

Product stage	A1	Supply of raw materials	X
	A2	Transport to factory	X
	A3	Manufacturing	X
Construction	A4	Transport to site	MNE
	A5	Installation / construction	MNE
Stage of use	B1	Usage	MNE
	B2	Maintenance	MNE
	B3	Repair	MNE
	B4	Replacement	MNE
	B5	Rehabilitation	MNE
	B6	Energy use in service	MNE
	B7	Water use in service	MNE
End of life	C1	Deconstruction / demolition	X
	C2	Transport	X
	C3	Waste treatment	X
	C4	Elimination	X
	D	Potential for reuse, recovery and/or recycling	X
X = Module included in the ACV; MNR = Not relevant Module; MNE = Not tested Module			

1.4. Differences from previous versions of this EPD.

This EPD is modified to include ENAC accreditation.

2. The product

2.1. Product identification

The product is identified as Parquet floor XL or XXL tongue & groove on four sides

It is further identified according to the visual classification assigned to its top layer of European oak wood (noble layer) depending on the singularities and appearance that is present. Thus, this product is available in the following appearance grades: Exquis, Elegant, Modern, Classic, Premium or Style.

In the American market it corresponds to the product defined as Engineered wood flooring.

This product is suitable for use as indoor flooring including fully enclosed public traffic areas.

This product is classified under the code CPC 31600.

2.2. Product performance

This product is manufactured and marketed under the harmonised standard UNE EN 14432: 2013. "Wood and parquet flooring. Characteristics, conformity assessment and marking". The product is manufactured under an established CPF factory production control and is labelled with a CE marking label, guaranteeing traceability.

Product performance

Performance	Calculation and test method	Value	Unit
Fire reaction	EN 13501-1	Class Cfl-s1	
Formaldehyde emission	EN 717-1	Class E1	
Pentachlorophenol content	UNE EN 14342	PCP < 5	ppm
Slip resistance USRV	UNE CEN/TS 15676	SRV > 45	
Thermal conductivity	UNE EN 14342	0,17	W/mK
Brinell hardness	UNE EN 1534	HB 2-3 semihard	

The following performance and characteristics are declared in addition to those required by harmonised standard:

- Moisture: final product 7-9% in the factory output.
- Manufacturing process in continuous hygrothermal monitoring by means of calibrated measuring instruments.
- Bonding: Adhesive classification D4 (UNE EN 204) with EPI adhesive system. Routine laboratory gluing quality control $F_v > 1$ (UNE EN 314-1 related to ASTM D3931-08/5266-13/ D3498-03).
- Static bending strength: 105-107 N/mm.
- Modulus of elasticity: 11.5-12.3 kN/mm²
- Compressive strength: 51.3-58 N/mm².
- Dimensional stability: Coefficient of volumetric shrinkage = 0.43% stable wood.
- Density (ref 12%): 710-750 kg/m³. Thermal resistance = 0.089 m²KW.FSC®.
- Product composition and PEFC® certification FloorScore® Indoor Air Quality Control Certificate.

- A+ CLASSIFICATION (VOC regulations in France).
- CARB and VOC TSCA VI. Emission certificate no urea formaldehyde is added.
- Carbon Footprint Register Greenhouse Gas Emission.
- ISO 9001:2015 Quality Management Systems Certificate.



Product composition

Substance/Component	Contents	Units
European oak sawnwood veneer	3,14	Kg/m ²
Birch plywood board	7,53	Kg/m ²
Counterbalance European oak.	2,89	Kg/m ²
Glue	140	g/m ²
Water yarnish	97	g/m ²

None of the components of the final product are included in the Candidate List of Substances of Very High Concern (SVHC) for authorisation or subject to other regulations.

2.3. Composition of the product

The composition declared by the manufacturer is as follows: Multilayer wood flooring, tongue and groove on four sides, surface finished and glued between layers with EP type adhesive. (Total product weight 13.56 kg/m²).



Exquis

Elegant

Moderno

Clásico

3. Information about the ACV

3.1. Life-Cycle Assessment

The Life Cycle Assessment report for the EPD of multilayer wood flooring production has been carried out by the Forestry and Wood Technology Centre (CETEMAS), with the Ecoinvent 3.8 database and the SimaPro 9.2.0.1 software, which is the most updated version available at the time of the study.

The study was carried out using data from the WM factory in Cantabria.

The study follows the requirements of the standards UNE-EN ISO 14040:2006, UNE-EN ISO 14044:2006, UNE-EN 15084:2012 +A2:2020 and UNE-EN ISO 14025:2010. The European standard UNE-EN ISO 16485:2004 has been used as the CPR.

3.2. Declared unit

The declared unit is 1 m² of multilayer wood flooring with a thickness of 20 mm.

Conversion factors for the declared unit:

Name	Value	Unit
Declared unit	1	m ²
Conversion factor to 1 kg	0,073	

3.3. Reference service life (RSL)

The reference service life of the multilayer wood flooring system is 25 years for the mechanical stability of the product and full maintenance of the structure and 10 years for the surface performance of the finish, based on the following documents: Maintenance Guide, Installation Guide and Product Warranty.

3.4. Assignment criterio

Given the complexity of the product under evaluation and the difficulty of collecting 100% of the information, the cut-off criterion was that at least 99% of the data should always be

inventoried, and that none of the entries left out of the study should have a relative contribution of more than 1%.

There are no co-products in the production process. It has not been necessary to apply economic allocation criteria.

3.5. Representativeness, Quality & choice of data

The data obtained for the modelling of the product life cycle have been obtained mainly from the production data of the WM factory during the year 2020. From this factory, data were obtained on: material and energy consumption, air emissions, discharges and waste generation.

3.6. Other calculation rules and assumptions

In order to simplify the inventory phase (LCI), the data collected in the inventory have been compiled according to volume and mass of raw material used. These data have then been converted to the declared unit.

To model the manufacturing processes of oak ply, birch plywood and oak blockboard, average data from a larger area including the studied area, with similar technology and with data sources less than 6 years apart from the reference year of the study (Diaz, 2019) were used.

To model the data related to the extraction of raw materials (forest operations and forest harvesting), average data from a larger area including the studied area, with similar technology and with data sources of less than 6 years difference with the reference year of the study have been used (Diaz, 2019).

The data quality criterion was to use primary sources whenever possible. When necessary, the Ecoinvent V3.8 database associated with the SimaPro 9.2.0.1 software (Pré Consultants, Amersfoort, The Netherlands) has been used. This database is the most widely used by more than 4,500 users in more than 40 countries. This database contains international data on life cycle inventories at industrial level on energy supply, resource extraction, material supply, manufacturing processes, agricultural processes, waste treatment services and means of transport. Ecoinvent is the world's leading provider of consistent, transparent and quality-recognised life cycle inventory (LCI) data.

The following criteria were used to select the most representative processes:

- The data must be representative of the technological development currently applied in the manufacturing processes. If no information was available, data representative of an average technology has been chosen.
- Geographical data should be as close as possible and, where appropriate, regionalised average data.
- Data should be as up to date as possible.

The data used in this study are representative of wood floor manufacturing in Spain.

To assess the quality of the study data, the evaluation criteria are applied based on point 6.3.8.3 of the UNE-EN 15804:2012+A2:2020 standard, where the data used in the study have been evaluated covering the following elements: time coverage, technological coverage and geographical coverage. The evaluation of the data has been based on table E.1 "Data quality level criteria of the UN global environmental guidelines on the development of LCA databases" in ANNEX E:

- Geographical representativeness: the data used in module A1, A2 and C are data from the area under similar manufacturing conditions. The data in module A3 are data from the surveyed area. QUALITY LEVEL: AVERAGE for modules A1, A2 and C and VERY GOOD for module A3.

- Technical representativeness: the data used in all modules are data from the processes and products studied, where the same technology defined for the product is applied. QUALITY LEVEL: VERY GOOD
- Temporal representativeness: the data used in module A3 and C are data from the year 2021 and the data used for modules A1 and A2 are data with a difference of less than 6 years with the reference period of the study. QUALITY LEVEL: GOOD for modules A1 and A2 and VERY GOOD for modules A3 and C.

The most relevant data of the study are considered to be the data related to module A3, therefore, the data used in this study are considered to be of high quality, consistent, traceable and justifiable.



4. Additional system limits, scenarios and technical information

4.1. A1-A2 Modules Prior processes to the manufacturing (upstream).

This first phase of the life cycle includes all the environmental aspects associated with the extraction of the raw material until it reaches the sawmills. This stage considers the forestry operations and uses, which are necessary for the forest management of oak and birch.

In addition, all the first transformation activities are contemplated to obtain the raw materials necessary for the manufacture of the three-layer floor: oak top layer, birch cross-laminated board and oak glue laminated board.

This phase includes the transport of oak and birch wood from the forest to the sawmill. And the transport of the oak top layer, birch plywood and oak blockboard from the European mills/sawmills (Romania, Russia and France, respectively) to the WM factory in Santander (Spain).

In addition, this stage includes the transport of the glue, the BONA finish and the EUROSALKI backing.

The transport of cardboard and plastic packaging, as well as the transport of pallets, is also considered.

4.2. A3 Module. ProductManufacturing

This stage of the life cycle includes the manufacture of the three-layer wood flooring.

The stages that comprise this phase are: selection, preparation and cutting; sandwich layer manufacturing (gluing, pressing and coating); calibration; milling and machining; and packaging.

At this stage, internal transport within the WM factory has been considered.

4.3. C Module. End-of-life stage

The end-of-life phase encompasses all environmental impacts associated with the life cycle from the dismantling of the flooring (module C1), its transport to the treatment plant (module C2), and its end-of-life (modules C3 and C4), including the supply and transport of all materials and products, including energy consumption until the end of the product's useful life.

In this case the end-of-life scenario considered for wood flooring is 100% incineration with energy recovery and for cardboard packaging waste 100% recycling, as these are the most likely scenarios for the product.

End of life

Parameter	Unit (expressed per functional unit)
Demolition	Electrical energy is considered to be consumed during the dismantling process. Electrical Energy: 4,26E-2 kWh/m ²
Collection process	9,13E-2 Kg/m ² Rcardboard packaging for recycling collected 13,59 kg/m ² for energy recovery
Elimination, specified by type	0,33 kg/m ² of product or material for final disposal
Scenario development assumptions (transport)	The waste is transported by EURO4 lorry of 16-32 tonnes. The average distance from the manufacturing plant to the waste manager is 210 km and to the landfill 50 km.

4.4. Benefits and beyond the system burdens

The benefits beyond the limits of the system, considering that 100% of the three-layer flooring could be recycled to make wood-based particleboards, are considered to be the environmental benefit of displacing wood chips as a raw material. Wood chips are the product that would be substituted for flooring in this new chipboard manufacturing system.

Wood shavings, being dry material, are highly valued by wood-based panel manufacturers as well as paper mills. For the stage of transporting the soil to the potential recycler, it is assumed that there are companies in Cantabria where the product can be distributed and which would be interested in absorbing this flow of wood as a raw material for their new products, so a transport of 50 km is assumed.



5. Declaration of the environmental parameters of the ACV & ICV

Environmental impacts

Parameter	Units	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Pámeter GWP-	kg CO2 eq	0,66	1,51	2,45	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,58E-1	1,04E-1	7,27E-2	12,6	4,89E-1
GWP-fossil	kg CO2 eq	0,645	1,51	3,3	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,54E-2	1,043E-1	-1,09E-2	1,16-1	-1,54E1
GWP-biogenic	kg CO2 eq	1,97E-2	2,03E-3	1,53	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,94E-4	1,38E-4	-1,11E-1	12,5	-3,19
GWP-luluc	kg CO2 eq	9,21E-3	7,31-4	1,267E-5	MND	MND	MND	MND	MND	MND	MND	MND	MND	6,68E-5	9,16E-7	-9,95E-5	2,12E-5	8,7E-3
ODP	kg CFC11 eq	1,27E-8	3,55E-7	4,43E-7	MND	MND	MND	MND	MND	MND	MND	MND	MND	9,29E-10	2,43E-8	-1,99E-9	1,04E-8	-8,84E-9
AP	mol H+ eq	7,99E-3	7,09E-3	2,03E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,33E-4	4,86E-4	-1,20E-4	1,48E-3	-1,38E-1
EP-freshwater	kg PO4 eq	7,69E-6	9,10E-7	1,63E-4	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,03E-7	7,79E-8	-1,46-E6	1,31E-6	-2,98E-3
EP-marine	kg N eq	3,42E-3	2,64E-3	8,86E-3	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,9E-5	1,81E-4	-4,43E-5	8,71E-4	1,4E-2
EP-terrestrial	mol N eq	3,74E-2	2,90E-2	4,75E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,12E-4	1,99E-3	-4,64E-4	7,62E-3	-1,69E-1
POCP	Kg NMVOC eq	9,43E-3	7,25E-3	2,77E-2	MND	MND	MND	MND	MND	MND	MND	MND	MND	5,688E-5	5,15E-4	-1,36E-4	1,99E-3	4,368E-2
ADP-minerals& metals ²	kg Sb eq	8,01E-9	6,58E-8	1,86E-6	MND	MND	MND	MND	MND	MND	MND	MND	MND	6,81E-10	4,65E-9	-1,58E-7	2,47E-8	-1,1E-6
ADP-fossil ²	MJ	8,51	21,7	45,4	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,8E-1	1,49	-1,13E-1	1,07	1,26E1
WDP ²	m3 depriv.	7,41E-2	-4,28E-3	1,8	MND	MND	MND	MND	MND	MND	MND	MND	MND	6,77E-3	-2,26E-4	-7,15E-2	-1,04E-1	-1,01E1

GWP - total: Global Warming Potential; **GWP - fossil:** Global warming potential of fossil fuels; **GWP - biogenic:** Biogenic global warming potential; **GWP - luluc :** Global warming potential of land use and land-use change; **ODP:** Stratospheric ozone layer depletion potential; **AP:** Acidification potential, cumulative surplus; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching the final freshwater compartment; **EP-marine:**utrophication potential, fraction of nutrients reaching the final freshwater compartment; **EP-terrestrial:** Eutrophication potential, cumulative surplus; **POCP:** Tropospheric ozone formation potential; **ADP-minerals&metals:**Abiotic resource depletion potential for non-fossil resources; **APD-fossil:** Abiotic resource depletion potential for fossil resources; **WDP:** Water deprivation potential (user), weighted water deprivation consumption.**NR:**Not relevant

Environmental impact parameters

Parameter	Units	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Incidencia de enfermedades	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
IRP ¹	kBq U235 eq	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETP-fw ²	CTUe	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HTP-c ²	CTUh	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HTP-nc ²	CTUh	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SQP ²	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

PM: Potential for disease incidence due to emissions of particulate matter (PM); **IRP** : Exposure efficiency of human potential relative to U235; **ETP-fw** : Ecosystem toxic unit comparative potential - freshwater; **HTP-c** : Ecosystem toxic unit comparative potential - carcinogenic effects; **HTP-nc** : Ecosystem toxic unit comparative potential - non-carcinogenic effects; **SQP** : Soil quality potential index; **NR**: Not relevant

Notice 1: This impact category deals mainly with potential impacts of low doses of ionising radiation on human health from the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents or occupational exposure due to disposal of radioactive waste in underground facilities. Ionising radiation potential of soil, due to radon or some building materials is also not measured by this parameter.

Notice 2: The results of this environmental impact indicator should be used with caution, as the uncertainties of the results are high and experience with this parameter is limited.

Use of resources

Parameter	Units	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	6,29E-1	7,7E-2	3,16E1	MND	MND	MND	MND	MND	MND	MND	MND	MND	5,70E-2	2,16E-3	-2,26	1,85E-2	-1,21E2
PERM	MJ	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0
PERT	MJ	6,29E-1	7,7E-2	3,16E1	MND	MND	MND	MND	MND	MND	MND	MND	MND	5,70E-2	2,16E-3	-2,26	1,85E-2	-1,21E2
PENRE	MJ	1,03E1	2,17E1	5,78E1	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,47E-1	1,49	-1,31E-1	1,07	-8,41E1
PENRM	MJ	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0
PENRT	MJ	1,03E1	2,17E1	5,78E1	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,47E-1	1,49	-1,31E-1	1,07	-8,41E1
SM	kg	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0
RSF	MJ	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0
NRSF	MJ	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0
FW	m ³	7,41E-2	-4,28E-3	1,8	MND	MND	MND	MND	MND	MND	MND	MND	MND	6,77E-3	-2,26E-4	-7,15E-2	-1,04E-1	1,01E-1

PERE: Primary renewable energy use excluding primary renewable energy resources used as feedstock; **PERM:** Primary renewable energy use used as feedstock; **PERT:** Total primary renewable energy use; **PENRE:** Primary non-renewable energy use excluding primary non-renewable energy resources used as feedstock; **PENRM:** Use of non-renewable primary energy used as feedstock; **PENRT:** Total use of non-renewable primary energy; **SM:** Use of secondary materials; **RSF:** Use of renewable secondary fuels; **NRSF:** Use of non-renewable secondary fuels; **FW:** Net use of flowing water resources; **NR:** Not relevant.

Waste categories

Parameter	Units	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	1,48E-6	5,76E-5	6,24E-5	MND	MND	MND	MND	MND	MND	MND	MND	MND	9,84E-8	3,95E-6	-3,1E-7	1,79E-6	3,05E-5
NHWD	kg	9,48	1,04E-3	3,97E-1	MND	MND	MND	MND	MND	MND	MND	MND	MND	5,66E-4	9,83E-5	-1,68E-3	5,5	-4,99E-1
RWD	kg	2,86E-5	1,54E-4	2,63E-4	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,56E-6	1,08E-5	-8,77E-7	2,94E-6	4,36E-4

HWD: Hazardous waste disposed of; NHWD: Non-hazardous waste disposed of; RWD: Radioactive waste disposed of; NR: Not relevant

Output flows

Parameter	Units	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
CRU	kg	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0	0,0
MFR	kg	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	2,03E-1	0,0	0,0	0,0
MER	kg	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0	0,0
EE	MJ	0,0	0,0	0,0	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,0	0,0	0,0	0,0	0,0	0,0

CRU: Components for reuse; MFR: Materials for recycling; MER: Materials for energy recovery; EE: Energy exported; NR: Not relevant.

Information on biogenic carbon content

Biogenic carbon content	Units	Result per declared functional unit
Biogenic carbon content product- KgC	Kg C	24,11
Biogenic carbon content packaging - KgC	Kg C	0,44

6. Additional environmental information

The product object of this Declaration has the environmental label on emissions into the interior air of France, with A+ classification. This label is awarded to those construction materials that contribute to a healthy and environmentally friendly habitat. This eco-label qualifies the products based on their VOC emissions (Volatile Organic Compounds) and according to tests carried out in accordance with the ISO 16000 standard, with a range that can go from A+ (the lowest harmful emissions) to C (those with the highest emissions).but tolerable.

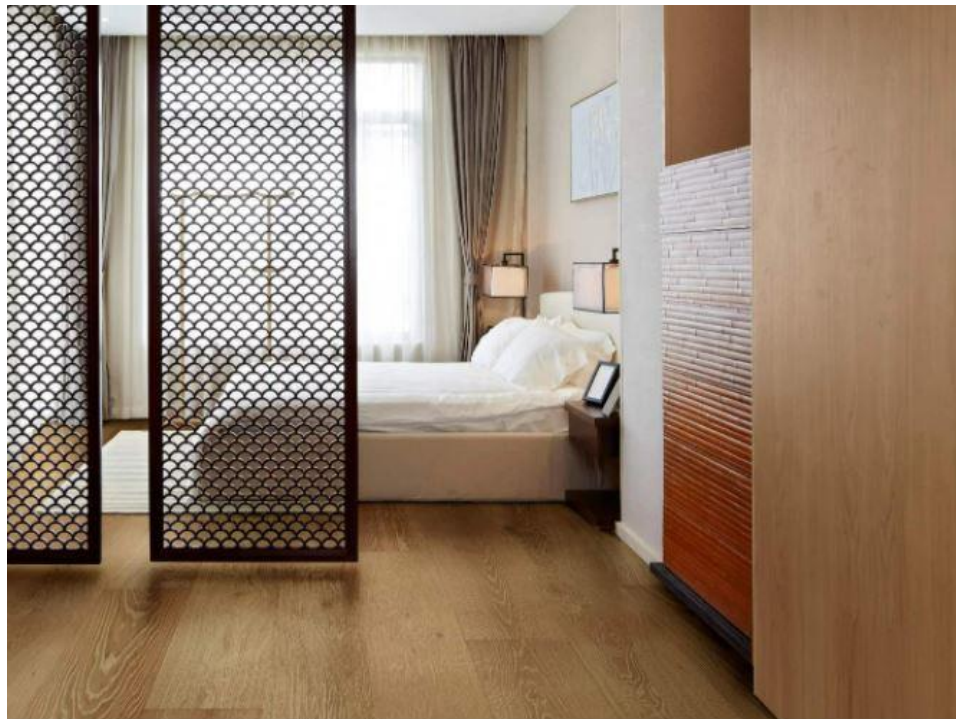
The product under study has FloorScore® Certificate that clearly shows the conformity of the products according to the emission requirements in the evaluation systems of the building in the United States of Americasuch as LEED.

The tests for obtaining this certificate are

based on state-recognised environmental and sustainability standards such as the CDPH standard method (formerly California Section 01350) or ANSI / BIFMA M7.1 and X7.1.

In addition, GRATO products are marketed in compliance with TSCA Title VI and CARB regulations that aim to reduce formaldehyde emissions from wood-based products, which will reduce exposure to formaldehyde and result inhuman health benefits.

Multilayer flooring can contribute to building a more circular economy considering that, at the end of its useful life, it is a product that can be recycled. Once decomposed, most of the material can be used in other manufacturing processes to form different wood and wood- based products such as chipboard and other wood-based products.



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