

Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

InfiniteTricoya® fibreboard

From ***Financiera Maderera S.A.***

Finsa

Programme:

The International EPD® System, www.environdec.com

Programme operator:

EPD International AB

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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): PCR 2019:14 Construction products (EN 15804:A2) Version 1.32 C-PCR-006 Wood and wood-based products for use in construction (EN 16485:2014)
PCR review was conducted by: PCR review was conducted by: The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact .
Independent third-party verification of the declaration and data, according to ISO 14025:2006: <input checked="" type="checkbox"/> External <input type="checkbox"/> Internal Covering <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier: Marcel Gómez. EPD Verifier. info@marcelgomez.com Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Financiera Maderera S.A.

Description of the organisation:

Tradition and innovation

Finsa is a pioneering company in manufacturing particle chipboards and MDF boards on the Iberian Peninsula.

The company, founded in 1931 as a small sawmill, has kept up sustainable growth even since.

FINSA currently manufactures a wide variety of wood-based products. Over the last few years, investment has focused mostly on expanding the company's international presence and on increasing its production capacity, especially in products with high added value within the technical wood processing chain: particle chipboards and melamine-coated MDF boards, plywood, veneered wood, frames, kitchen modules, components for furniture, laminate floors, etc. Thanks to this, FINSA is now a world leader in the sector.

With great enthusiasm grounded in years of experience in the development of wood-based products, we would like you to take advantage of the opportunity to use technical wood boards in your projects and share our investment in the future of this material.

Entrepreneurial experience

Backed by 60 years dedicated to wood-based products, we are one of the leading companies in Europe. We have twenty production centres and the most advanced technology in order to ensure the highest level of quality.



We boast a highly qualified human capital who identify with our company's values.

**Future vision**

A strong investment in innovation and an environmental policy based on sustainable development.

Focus on the customer

A swift and reliable logistics network: 450 vehicles out on the road daily.

Wood solutions designs that adapt to the needs of the market.

An entrepreneurial spirit: ready to learn, to improve and to take up new challenges in order to offer greater value to our customers every day.

Social responsibility

FINSA's commitment towards sustainable growth extends beyond the limits of our manufacturing facilities.

From Nature we get wood, our main raw material, and so our obligation is to respect it and protect it.

We develop initiatives regarding the collaboration with other public and private organizations that foster the protection and efficient management of forests.

The environment

Through our Environmental Policy, we are actively committed to environmental protection.

We want the environmental impact of our manufacturing processes to be as small as possible.



As a result, we are one of the cleanest industries: we generate more energy than we consume processing our products.

Our production processes are optimized in order to achieve the maximum level of energy savings through cogeneration (by taking advantage of the energy and heat produced by the production facilities themselves) and achieve a minimum level of waste.

In addition, the waste generated by our activity and which has no other use is used for generating energy through our biomass production facilities, both in our own production processes in the plant as well as during the stage of use. The life cycle model is the model specified below:



Scope of application of the Declaration

The present document applies to raw medium density fibreboards (MDF) and to melamine faced MDF boards, manufactured by the Finsa Group.

Product-related or management system-related certifications:

- CE marking according to standard EN 13986 –AENOR certification, if applicable.
- AITIM Quality Certification, if applicable.
- Certification of chain of custody PEFC.
- Certification of chain of custody FSC.
- Certification ISO 38200.
- EN ISO 14001 – IQNet & AENOR.

Name and location of production site(s):

FINANCIERA MADERERA S.A.
Calle 1, Ricardo Martín Esperanza S/N Polígono San Cibrao
San Cibrao Das Viñas Ourense
Polígono Industrial de Rábade, s/n, 27370 Rábade, Lugo
www.finsa.es

Contact:

Pablo Figueroa López
FINSA Executive Committee

Product information

Product name: The analysed product is Infinite Tricoya® fibreboard.

Product description:

Finsa Infinite Tricoya® is a wood fibreboard for exteriors. Its high performance makes it a wood panel with excellent durability and dimensional stability, designed for the most extreme conditions. This panel incorporates a patented wood acetylation process, which gives it these hydrophobic technical qualities.

Infinite Tricoya® fibreboards are suitable for use in use class 4 conditions defined in EN 335, in direct contact with the ground and/or fresh water, in both exterior and interior applications.

Recommended use

Finsa Infinite Tricoya is suitable for a large number of indoor humid environment applications and for outdoor use. This is due to its biological durability and high dimensional stability.

Benefits

- Durable: More durable, perfect for outdoor use or wet environments (indoor and outdoor).
- Freedom of design: All the design, machining and assembly flexibility of MDF.
- Fungal resistance: Effective barrier against fungal decay.
- 50-year warranty: Peace of mind with a Tricoya warranty of 50 years above ground and 25 years on ground.
- Dimensional stability: Swelling and shrinkage are drastically reduced.
- Ideal for coating: Its improved stability and durability increase the service life of the coating.
- Low maintenance costs: Significant reduction in the frequency of maintenance of exterior coatings.
- Sustainable sources: FSC® and PEFC™ certification of sustainably managed forests.



Infinite Tricoya® fibreboards

The technical characteristics of the product are the following:

CARACTERISTIC	STANDARD	VALUE
Density	EN 323	690 kg/m ³
Internal traction	EN 319	0.90- 0.75 N/mm ²
Bending resistance	EN 310	32-18 N/mm ²
Class	EN 335	3-4
Reaction to fire	EN 13501-	E
Formaldehyde emission		CARB2

UN CPC code: 314 Boards and panels

LCA information

Declared unit: The declared unit is the baseline reference for which all information is collected. For this EPD, the concept of "unit declared" applies instead of "functional unit", following the guidelines established in the reference PCR. The declared unit is "1 m³ of Infinite Tricoya® fibreboard". The average density is 690 kg/m³ (± 20 Kg, with relative humidity of around 7 %).

Reference service life: Not relevant for this EPD.

Geographical scope: The geographical scope of this EPD is Europe.

Technological coverage: The technological coverage is typical or average.

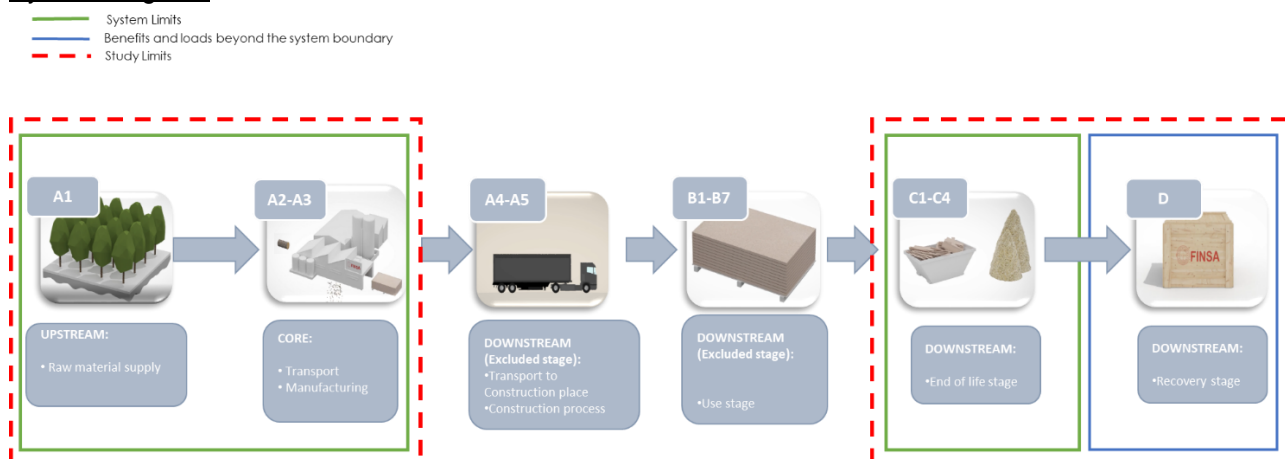
Time representativeness: The data collection from factory (primary data) and electricity mix are from 2022/01/01 to 2022/12/31. In this study, no datasets older than 10 years were used.

The target audience Mainly businesses to business.

Database(s) and LCA software used: All the data used to model the process and obtain the Life Cycle Inventory are specific data and have been obtained by measurements made during the period from 2022/01/01 to 2022/12/31. They are representative of the different processes implemented during the manufacturing process. The data has been measured directly at the company's own premises. In addition, the most complete and highest quality European life cycle inventory database, Ecoinvent 3.9, has been used, as this database contains the most extensive and updated information and its scope coincides with the geographical, technological and temporal area of the project. The LCA was modelled with Simapro 9.5.0.1.

Description of system boundaries: According to the standard UNE-EN 15804_2012+A2_2020 (MARCH 2020) and PCR 2019:14 CONSTRUCTION PRODUCTS (version 1.32) the system boundary is cradle to gate with modules C1–C4 and module D (A1–A3 + C + D). The life cycle stages A4–A5, B1–B7 were excluded from the LCA study.

System diagram:



Manufacturing process:

The process starts from the manufacture of the acetylated wood chips. Acetylation is a chemical process in which wood is reacted with acetic anhydride to transform hygroscopic hydroxyl chemical groups into hydrophobic acetyl groups. This blocking of the hydroxyl groups drastically reduces the capacity of the wood to absorb/deabsorb water while protecting it from biological attacks, thus preventing it from swelling/deflation and also improving its dimensional stability and extraordinarily its durability.

These chips are mixed with different resins to create fibre sheets. The fibre sheets are compressed using continuous hot pressing. The boards are cut and ended in order to obtain the required board sizes. Finally the boards are packed and stored until they are sent to the customer.

All waste generated during the production process (waste from cutting the boards, chip waste, and debarking or sanding waste) and which can no longer be reused in the process, is, without exception, forwarded to a thermal reusing process. It is kept in storage in the wood park and fed from the wood park along with the stored material that was purchased in the market.

Author of the Life Cycle Assessment:

IK ingeniería

Av. Cervantes 51, Edif. 10, planta 5, dpto.

48970 Basauri, Bizkaia (Spain)

Data quality

The environmental impact of the infinite Tricoya® has been calculated. It is based on the international standards established for the development of environmental product declarations, such as ISO 14025 for the preparation of the environmental product declaration, ISO 14040 and ISO 14044 for the preparation of the life cycle analysis, UNE-EN 15804:2012+A2:2020 (MARCH 2020) and the Product Category Rules PCR - "2019:14 Construction products " (Version 1.32).

The data used are less than 5 years old. Data has been collected from 2022/01/01 to 2022/01/31 and is representative of that year. Data for raw material supply, transport to fabrication plant and production (A1-A3) is based on specific consumption data for the factory at Ourense. Generic background datasets were used for the downstream processes.

All input and output data from Finsa were made available. Thus, it can be assumed that the data are fairly representative. Viability of all data delivered has been confirmed. All information comes from operational data and from measurements, so data quality can be described as very good.

SimaPro v9.5.0.1. software was used to prepare the life cycle analysis together with the Ecoinvent 3.9 database. Characterization factors from EN15804: 2012 + A2:2019.

Assumptions

The modularity principle, as well as the polluter-payer principle have been followed. The following assumptions have been made in this EPD:

- ✓ It does not include the manufacturing processes of the capital goods or spare parts and/or maintenance with a life of more than three years.
- ✓ The environmental impact of infrastructure for general management, office, and headquarters operations is not included.
- ✓ The impact caused by people (common activities, travel for work...) will not be considered.
- ✓ It does not include the consumption of natural gas for sanitary hot water from showers and heating system for the comfort of people.
- ✓ The processes associated with fuel production are intrinsically included in the indicators in ECOINVENT's database used in carrying out the LCA.
- ✓ Transportation of all raw materials and / or secondary materials is calculated according to the means of transportation that were used, using data from the SimaPro program database.
- ✓ The invoices from the power supply companies were considered for calculating the power supply used in the manufacturing process.

- ✓ All waste that is generated during production and which cannot be re-circulated into the process (cutting and milling waste) is sent to be used as fuel for the biomass boiler.
- ✓ The closure of the life cycle is assumed to be the thermal use of waste at a biomass generation plant.

Cut-off rules

The standard ISO 14025 and the PCR -"2019:14 CONSTRUCTION PRODUCTS" indicate that the life cycle inventory data should include a minimum of 95% of the total inputs (materials and energy) for each stage. This cut-off rule does not apply for hazardous materials and substances. No such cut-off criteria have been taken into account in this study.

Allocation

Where necessary, such as auxiliary materials, water, waste generation, emissions and energy consumption, an allocation based in mass has been used.

Greenhouse gas emission from the use of electricity in the manufacturing phase

Specific electricity mix, medium voltage (direct emissions and losses in grid) electricity is considered for the manufacturing process. The energy sources are: Renewable (3,2%); Cogen. High efficiency (2,1%); CC natural gas (43,8%); Carbon (4,9%); Fuel/Gas (1,9%); Nuclear (35,3%); Other non-renewable (8,8%).

Electricity mix	Amount	Units
Specific electricity mix	5,34E-01	Kg CO ₂ -eqv/kWh

LCA Scenarios and additional technical information

Dismantling/demolition (module C1):

Since they are not products with a structural use, the energy consumption of this phase is considered not relevant.

Transport (module C2):

With a collection rate of 100%, the transports are carried out by lorry (EURO 5) over 50 km.

Waste processing (modules C3 and C4):

A recycling ratio of 80,4 %, energy recovery ratio of 6,1 %, incineration ratio of 12,0 % and a landfilled ratio of 0,9% is considered in accordance with the publication of the H2020 project "Absorbing the Potential of Wood Waste in EU Regions and Industrial Bio-based Ecosystems — BioReg" document "D1.1 EUROPEAN WOOD WASTE STATISTICS REPORT FOR RECIPIENT AND MODEL REGIONS" for Europe

(<https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5bf1792ce&appId=PPGMS>). These percentages are representative of the areas where the product is marketed.

In module C3, the board's waste treatment (chipping) is considered. In module C4 the impact of incineration process and the landfilling.

Recyclability potentials (module D):

Module D contains credits from the recycling and energy recovery of the boards in module C3. For the recycling process is considered that the board is collected and recycled for use in substitution of virgin wood chips. For energy recovery, use in substitution of natural gas, to produce heat and electricity.

LCA Scenarios for end of life

Processes	Per Declared unit	
Collection process specified by type	8,40E+02	Kg collected separately
	0,00E+00	Kg collected with mixed construction waste
Recovery system specified by type	0,00E+00	Kg for reuse
	6,76E+02	Kg for recycling
	5,14E+01	Kg for energy recovery
Disposal specified by type	1,13E+02	Kg for final disposal
Assumptions for scenario transportation	Lorry 16-32 metric ton, EURO5 Consumption: 0,03kg/km Distance:50 km	

Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	ES	ES	ES	ND	ND	ND	ND	ND	ND	ND	ND	ND	EU	EU	EU	EU	EU
Specific data	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

ND: Not declared

Content information

The content information per 1m³ is as follows:

Product components	Per 1 m3		
	Weight, kg	Post-consumer material, weight-%	Renewable material, weight-%
Wood	641,70	0,00%	100,00%
Acetic acid	0,69	0,00%	0,00%
Resins	40,34	0,00%	0,00%
Paraffin emulsion	7,27	0,00%	0,00%
TOTAL	690,00	0,00%	93,00%
Packaging materials	Weight, kg	Weight-% (versus the product)	
Cardboard	0,65	0,09%	
Plastic	0,87	0,13%	
Strap	0,22	0,03%	
TOTAL	1,74	0,25%	

Packaging: The product is transported to the customers protected cardboard, plastic and straps.

No substances included in the Candidate List of Substances of Very High Concern for authorization under REACH Regulations are present in the analyzed boards manufactured by FINSA, either above the threshold for registration with the European Chemicals Agency or above 0,1% (wt/wt).

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804:2012+A2:2019:

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	1,90E+03	0,00E+00	6,91E+00	5,01E+00	8,65E-01	-1,40E+02
GWP-biogenic	kg CO ₂ eq.	-7,45E+02	0,00E+00	2,31E-03	6,46E+02	1,01E+02	-1,59E+01
GWP-luluc	kg CO ₂ eq.	1,15E+00	0,00E+00	3,37E-03	1,20E-02	2,82E-04	-5,04E-01
GWP-total	kg CO ₂ eq.	1,16E+03	0,00E+00	6,92E+00	6,51E+02	1,02E+02	-1,57E+02
ODP	kg CFC 11 eq.	2,56E-04	0,00E+00	1,57E-07	8,92E-08	4,05E-08	-4,13E-06
AP	mol H ⁺ eq.	9,74E+00	0,00E+00	1,71E-02	2,50E-02	2,61E-02	-1,20E+00
EP-freshwater	kg P eq.	5,91E-02	0,00E+00	5,79E-05	4,76E-04	1,60E-05	-1,04E-02
EP-marine	kg N eq.	4,04E+00	0,00E+00	4,56E-03	3,52E-03	1,26E-02	-3,39E-01
EP-terrestrial	mol N eq.	2,44E+01	0,00E+00	4,78E-02	4,04E-02	1,41E-01	-4,59E+00
POCP	kg NMVOC eq.	1,27E+01	0,00E+00	2,79E-02	1,34E-02	3,78E-02	-1,23E+00
ADP-minerals&metals*	kg Sb eq.	1,71E-02	0,00E+00	1,93E-05	1,10E-05	2,03E-06	-5,69E-04
ADP-fossil*	MJ	4,51E+04	0,00E+00	1,05E+02	1,12E+02	9,98E+00	-2,50E+03
WDP**	m ³ deprive	1,94E+03	0,00E+00	5,01E-01	1,17E+00	2,22E-01	-1,41E+02
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption						

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

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Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit						
Indicator	A1-A3	C1	C2	C3	C4	D
GWP-GHG ¹	1,91E+03	0,00E+00	6,92E+00	5,05E+00	1,57E+00	-1,57E+02

Use of resources

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	1,61E+03	0,00E+00	1,53E+00	2,11E+01	4,57E-01	-6,42E+03
PERM	MJ	1,73E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,34E+03	0,00E+00	1,53E+00	2,11E+01	4,57E-01	-6,42E+03
PENRE	MJ	4,11E+04	0,00E+00	1,05E+02	1,12E+02	9,98E+00	-2,49E+03
PENRM	MJ	5,37E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	4,65E+04	0,00E+00	1,05E+02	1,12E+02	9,98E+00	-2,49E+03
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	3,69E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,80E+01
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	4,74E+01	0,00E+00	1,65E-02	8,68E-02	4,25E-02	-3,84E+00

¹ The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Waste production

Results per functional or declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,63E+00	0,00E+00	3,20E-05	1,56E-04	5,21E-05	-8,62E-03
Non-hazardous waste disposed	kg	1,68E+02	0,00E+00	1,53E+00	6,16E-01	1,09E+01	-1,86E+01
Radioactive waste disposed	kg	2,40E+03	0,00E+00	1,05E+02	7,95E-04	6,74E-06	-6,72E-03

Output flows

Results per functional or declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	6,02E-01	0,00E+00	0,00E+00	5,55E+02	0,00E+00	0,00E+00
Materials for energy recovery	kg	3,64E+02	0,00E+00	0,00E+00	4,23E+01	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,86E+02
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,33E+03

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	2,04E+02
Biogenic carbon content in packaging	kg C	2,97E-01

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂.

Additional information

The technical datasheet and the safety datasheet can be found in the following webpage:

<https://www.finsa.com/es/fg/infinite-tricoya1>

Information related to Sector EPD

This is an individual EPD[®]

Differences versus previous versions

This is the first version of the EPD[®].

References

- General Programme Instruction of the International EPD®System. Version 4.0.
- ISO 14020:2000 Environmental labels and declarations-General principles.
- ISO 14025:2010 Environmental labels and declarations-Type III Environmental Declarations-Principles and procedures.
- ISO 14040:2006 Environmental Management-Life Cycle Assessment-Principles and framework.
- ISO 14044:2006 Environmental Management-Life Cycle Assessment-Requirements and guidelines.
- C-PCR-006 Wood and wood-based products for use in construction (EN 16485:2014)
- PCR 2019:14 Construction products (EN 15804: A2) version 1.32
- EN 15804:2012+A2:2019 Sustainability of construction works-Environmental Product Declarations-Core rules for the product category of construction products

