

Environmental Product Declaration



In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

Pura® NFC

from

Trespa International B.V.



Programme:

The International EPD® System, www.environdec.com

Programme operator:

EPD International AB

EPD registration number:

S-P-06220

Publication date:

2022-06-09

Valid until:

2027-06-08

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
E-mail:	info@environdec.com

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): < PCR 2019:14. CONSTRUCTION PRODUCTS. VERSION 1.11
PCR review was conducted by: <IVL Swedish Environmental Research Institute (martin.erlandsson@ivl.se) and Secretariat of the International EPD® System
Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☐ EPD process certification ☒ EPD verification
Third party verifier: Ugo Pretato, Approved individual verifier, Studio Fieschi & Soci C.so Vittorio Emanuele II, 18, 10123, Torino, Italy. www.studiofieschi.it Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Trespa International B.V., Wetering 20, 6002 SM Weert

Contact: i.akal@nemho.com

Description of the organisation: Trespa International B.V. is a leading innovator in the field of architectural materials, recognised internationally as a premier developer of high quality panels for exterior cladding, decorative façades, and scientific surface solutions. Since its founding in 1960, Trespa has worked closely with architects, designers, installers, distributors, raw material suppliers and end users globally. Trespa's focus is on product development, combining quality-manufacturing technologies with intelligent solutions for architectural and scientific surface applications. With unique insights into key market challenges, trends and demands, Trespa passionately delivers innovative aesthetically pleasing and high performance solutions for a wide range of needs.

Product-related or management system-related certifications: Trespa International B.V. is, amongst other certification schemes, certified based on ISO 9001, ISO 14001, PEFC and FSC.

Name and location of production site(s): Weert (the Netherlands)

Product information

Product name: Pura ® NFC by Trespa B.V.

Product identification: High pressure laminates for exterior applications

Product description: Pura ® NFC by Trespa B.V. are decorative high-pressure compact laminates (high-pressure laminates, HPL) according to EN 438-6:2016.

Manufacturing process: Pura® NFC by Trespa B.V. comprise layers of natural fibres, impregnated with thermosetting resins and surface layer on one side, having decorative colours. A transparent topcoat is added to the surface layer and cured by Trespa's unique in-house technology Electron Beam Curing (EBC), to enhance weather and light protecting properties. These components are bonded together with simultaneous application of heat and high specific pressure to obtain a homogeneous closed material with increased density and integral decorative surface. They are available in a selection of décors and colors.

UN CPC code: Not available.

LCA information

Declared unit: 1 square meter of 8 mm finished product with a density of 1437 kg/m³ plus primary packaging

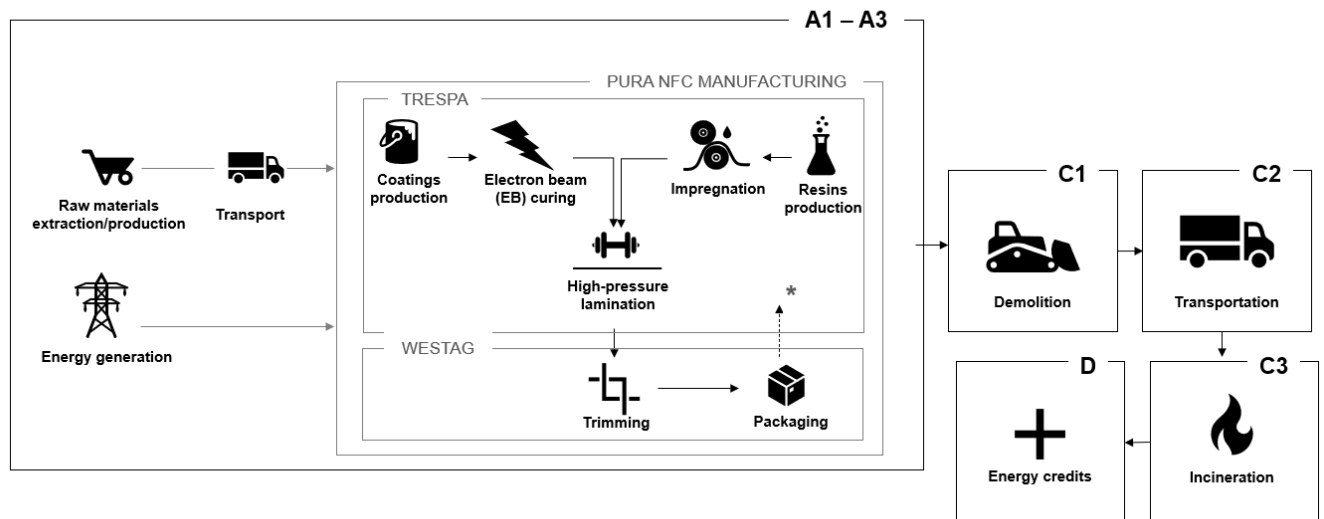
Reference service life: The reference service life for Pura® NFC is set at 50 years, provided that they are subject to appropriate installation, use and maintenance under normal conditions.

Time representativeness: 2020 production year

Database(s) and LCA software used: The LCA study was performed with the support of the Simapro LCA software (version 9.3) and Ecoinvent 3.8 and Carbon Minds database

Description of system boundaries:

[a] Cradle to gate with modules C1–C4 and module D (A1–A3 + C + D);

System diagram:

**for customers outside of Germany*

More information:

Name and contact information of LCA practitioner: Irmak Akal (i.akal@nemho.com), Anouk Heeren (a.heeren@nemho.com)

Name of the organisation carrying out the underlying study: Trespa International B.V.

Modelling of electricity in module A3: according to the specific electricity mix purchased by Trespa, which corresponds to 100% renewable energy, specifically from wind. The impact on climate change of 1 kWh is 3,12E-02 kgCO₂eq.

Main assumptions adopted in the study:

- Secondary data are taken from the database Ecoinvent v 3.8 and Carbon Minds. In the selection of secondary data, priority is given to more representative data in terms of temporal coverage, geographical coverage, and production technology.
- When the supplier of a raw material is known, specific transport distances from the supplier to the factory are considered in the study, otherwise transport is modelled according to average transport distances reflecting the market mix.
- The transport of packaging materials is excluded from the system boundary.

End of life scenario for Pura@NFC panels:

Pura@NFC panels are commonly used as secondary material for energy recovery, therefore it is assumed that 100% of the finished product at the end of life is sent to incineration. Loads from material incineration (C3) and resulted energy credits (module D) are declared. Energy credits are calculated considering a lower heating value (LHV) of panels equal to 19 MJ/kg as declared by ICDLI (2015) and an efficiency of incineration equal to 60%.

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	GLO	GLO	EU	ND	ND	ND	ND	ND	ND	ND	ND	ND	EU	EU	EU	EU	EU
Specific data used	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation -- products	Not relevant					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	Not relevant					-	-	-	-	-	-	-	-	-	-	-	-

X= module declared

Content information

The declared unit is defined as 1 square meter of finished Pura® NFC HPL panel in 8 mm thickness with a density of 1437 kg/m³.

Product components	Weight, kg	Post-consumer material, weight-%	Renewable material, weight-%
Phenolic resin	4,510 – 4,694	0%	0%
Kraft paper	6,398 – 6,660	0%	100%
Coating chemicals	0,235 – 0,245	0%	0%
Décor paper	0,157 – 0,163	0%	100%
TOTAL	11,5	0%	57-59%
Packaging materials	Weight, kg	Weight-% (versus the total packaging)	
Crates	0,08	57%	
Metal corner straps	0,0003	0%	
PE foil	0,006	4%	
Cardboard	0,048	34%	
Paper sleeves and labels	0,004	3%	
TOTAL	0,14	100%	
Additional materials	Weight, kg	Weight-% (versus the total additional materials)	
Support profile	0,0224	39%	
Clips with screws: clips	0,000103	0%	
Clips with screws: screws	0,027	47%	
Screws	0,00835	14%	
TOTAL	0,06	100%	

Dangerous substances from the candidate list of SVHC for Authorisation
Pura® NFC panels do not contain substances listed on the candidate list of Substances of Very High Concern, as published on the ECHA website, in concentrations exceeding 0.1 percentage by mass.

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804

Results per functional or declared unit							
Indicator	Unit	Tot.A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	2,91E+01	4,04E-01	1,03E-01	9,47E+00	0,00E+00	-1,15E+01
GWP-biogenic	kg CO ₂ eq.	-1,33E+01	0,00E+00	0,00E+00	1,33E+01	0,00E+00	0,00E+00
GWP-luluc	kg CO ₂ eq.	4,55E-02	9,54E-04	3,75E-05	9,38E-05	0,00E+00	-1,18E-02
GWP-total	kg CO ₂ eq.	1,59E+01	4,05E-01	1,03E-01	2,28E+01	0,00E+00	-1,15E+01
ODP	kg CFC 11 eq.	7,80E-06	2,00E-08	2,49E-08	2,89E-08	0,00E+00	-9,44E-07
AP	mol H ⁺ eq.	1,30E-01	2,18E-03	5,26E-04	5,04E-03	0,00E+00	-3,32E-02
EP-freshwater	kg PO ₄ ³⁻ eq.	3,65E-02	1,24E-03	1,99E-05	2,16E-04	0,00E+00	-1,51E-02
EP-freshwater	kg P eq.	1,19E-02	4,04E-04	6,49E-06	7,04E-05	0,00E+00	-4,93E-03
EP-marine	kg N eq.	2,74E-02	3,77E-04	1,80E-04	2,92E-03	0,00E+00	-5,84E-03
EP-terrestrial	mol N eq.	2,81E-01	3,28E-03	1,97E-03	2,65E-02	0,00E+00	-5,35E-02
POCP	kg NMVOC eq.	8,89E-02	8,96E-04	5,89E-04	6,69E-03	0,00E+00	-1,74E-02
ADP-minerals&metals*	kg Sb eq.	2,27E-04	9,48E-07	2,39E-07	7,54E-07	0,00E+00	-1,93E-05
ADP-fossil*	MJ	5,58E+02	8,60E+00	1,62E+00	1,74E+00	0,00E+00	-2,02E+02
WDP	m ³	3,64E+00	9,52E-02	5,59E-03	6,08E-02	0,00E+00	-1,19E+00
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.

Potential environmental impact – additional mandatory and voluntary indicators

Results per functional or declared unit							
Indicator	Unit	Tot.A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ eq.	2,88E+01	4,01E-01	1,03E-01	9,46E+00	0,00E+00	-1,12E+01

Potential environmental impact – additional mandatory and voluntary indicators. Results for North America calculated according to ISO 21930

Results per functional or declared unit							
Indicator	Unit	Tot.A1-A3	C1	C2	C3	C4	D
GWP (ISO 21930)	kg CO ₂ eq.	2,85E+01	3,99E-01	1,02E-01	9,46E+00	0,00E+00	-1,11E+01
ODP (ISO 21930)	kg CFC-11 eq.	7,86E-06	2,11E-08	2,62E-08	3,00E-08	0,00E+00	-9,89E-07
EP (ISO 21930)	kg N eq	1,81E-01	3,07E-03	1,04E-04	1,02E-02	0,00E+00	-3,77E-02
AP (ISO 21930)	kg SO ₂ eq	1,07E-01	1,79E-03	4,65E-04	4,58E-03	0,00E+00	-2,75E-02
POCP (ISO 21930)	kg NMVOC eq.	1,44E+00	1,78E-02	1,14E-02	1,43E-01	0,00E+00	-2,97E-01
Acronyms	GWP (ISO 21930)= Global Warming Potential calculated with TRACI; ODP (ISO 21930)= Ozone Depletion Potential calculated with TRACI; EP (ISO 21930)= Eutrophication Potential calculated with TRACI; AP (ISO 21930)= Acidification Potential calculated with TRACI; POCP (ISO 21930)= Photochemical oxidant creation potential calculated with TRACI						

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

Use of resources

Results per functional or declared unit							
Indicator	Unit	Tot.A1-A3	C1	C2	C3	C4	D
PERE	MJ	2,19E+02	1,49E+00	2,07E-02	1,00E-01	0,00E+00	-1,81E+01
PERM	MJ	1,00E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,19E+02	1,49E+00	2,07E-02	1,00E-01	0,00E+00	-1,81E+01
PENRE	MJ	4,22E+02	8,60E+00	1,62E+00	1,74E+00	0,00E+00	-2,02E+02
PENRM	MJ.	1,36E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	5,58E+02	8,60E+00	1,62E+00	1,74E+00	0,00E+00	-2,02E+02
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m³	3,41E-01	7,17E-03	1,93E-04	6,58E-03	0,00E+00	-8,76E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water						

Waste production and output flows

Waste production

Results per functional or declared unit							
Indicator	Unit	Tot.A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	9,13E-02	1,20E-03	8,95E-05	6,01E-01	0,00E+00	-1,53E-02
Non-hazardous waste disposed	kg	6,02E+00	2,85E-02	1,52E-01	2,49E-01	0,00E+00	-3,92E-01
Radioactive waste disposed	kg	1,91E-03	6,31E-05	1,10E-05	5,01E-06	0,00E+00	-7,74E-04

Output flows

Results per functional or declared unit							
Indicator	Unit	Tot.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	3,24E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	1,15E+01	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	4,32E+01	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	8,78E+01	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per functional or declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	3,80E+00
Biogenic carbon content in packaging	kg C	2,67E-02

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

Additional information

Reducing the carbon footprint are key parts of our overall sustainability policy and it is based on our core belief that it is the right thing to do. We are also convinced that reducing our overall environmental footprint is essential to the long-term success of our business and the environment around us. That is why sustainability is embedded in our business philosophy with the credo 'do no harm, do good, do better.'

At the core of our sustainability strategy is the principle that we should start with ourselves when we seek to improve the world: 'do no harm.' Our approach is straightforward: we measure our impact, select targets to reduce this impact and monitor and report on progress. To measure our impact, we use the Life Cycle Assessment (LCA) methodology.

The second element of our strategy is to look for opportunities that support the environment beyond the direct scope of our own manufacturing footprint: 'do good.' This includes creating highly durable products that have a long lifespan that limit the need for replacement. Additionally, we will develop projects that absorb or reduce carbon emissions that are not directly linked to our factories or product portfolio. We believe that addressing sustainability challenges will allow our company to continue to grow and 'do better' in the future. Investing in sustainability should – in the end – ensure that these efforts go beyond established regulatory requirements and the net effect of our efforts will positively impact the environment in which we operate.

Further details on our philosophy, approach and goals can be found in our position paper available online: https://www.trespa.com/en_US/sustainability

References

1. EN 438-2:2016 High-pressure decorative laminates (HPL).
2. EN 15804:2012+A2 Sustainability of construction works – Environmental product declarations - Core rules for the product category of construction products.
3. ISO. (2006). ISO 14040: Environmental management – Life cycle assessment – Principles and framework. Geneva: International Organization for Standardization.
4. ISO. (2006). ISO 14044: Environmental management – Life cycle assessment – Requirements and guidelines. Geneva: International Organization for Standardization.
5. PCR 2019:14. Construction Products And Construction Services. Version 1.11.
6. Nemho (2022). Background report for EPD Pura®NFC
7. EPD International. (2019). GENERAL PROGRAMME INSTRUCTIONS FOR THE INTERNATIONAL EPD® SYSTEM V 3.01
8. ICDLI (2015). Technical characteristics and physical properties of HPL (Technical leaflet).
9. Plastics Europe (2018). European Plastic Waste: Recycling Overtakes Landfill For The First Time
European plastic waste: recycling overtakes landfill for the first time: PlasticsEurope taken from:
https://www.plasteurope.com/news/PLASTICS_RECYCLING_EUROPE_t238815/

