ENVIRONMENTAL PRODUCT DECLARATION

as per /ISO 14025/ and /EN 15804/

Owner of the Declaration	**Trespa International B.V.**
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-TRE-20180143-IBB1-EN
ECO EPD Ref. No.	
Issue date	04.04.2019
Valid to	03.04.2024

Trespa® Meteon®

Trespa International B.V.

Institut Bauen und Umwelt e.V.

www.ibu-epd.com / https://epd-online.com

ECO PLATFORM EPD EN 15804 VERIFIED

1. General Information

Trespa International B.V.

Programme holder
IBU - Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany

Declaration number
EPD-TRE-20180143-IBB1-EN

This Declaration is based on the Product Category Rules:
Laminates, 07.2014
(PCR tested and approved by the SVR)

Issue date
04.04.2019

Valid to
03.04.2024

Prof. Dr.-Ing. Horst J. Bossenmayer
(President of Institut Bauen und Umwelt e.V.)

Dr. Alexander Röder
(Managing Director IBU)

**Trespa® Meteon®
FR and STD grade**

Owner of the Declaration
Trespa International B.V.
Wetering 20
6002 SM Weert (The Netherlands)

Declared product / Declared unit
Trespa® Meteon® (FR & STD grade) / 1m^2

Scope:
The Life cycle Assessment is based on data from Trespa International B.V. covering production year 2015 for Trespa Meteon FR grade and Trespa Meteon STD grade panels with as manufacturing plant Weert (The Netherlands).

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification

The CEN Norm /EN 15804/ serves as the core PCR
Independent verification of the declaration according to /ISO 14025/
☐ internally ☒ externally

Angela Schindler
(Independent verifier appointed by SVR)

2. Product

2.1 Product description / Product definition

Trespa® Meteon® panels are decorative high-pressure compact panels (high-pressure laminates, HPL) in accordance with the European EN 438 standard and ISO 4586. Trespa® Meteon® panels comprise individual wood-based layers of fibre, treated with thermosetting resins and pressed under high pressure. The panels are attributed a decorative on one or both sides of the panels. In case of one-sided décor layer, the other side is painted plain black.

An average product of Meteon® FR and STD is declared. The collected data contains the complete production information on both processes, which obtain the equal production volume.

Trespa® Meteon® FR grade panels contain fire-retardant additives, which improve the reaction to fire performance of the panels. Moreover the composition of FR and STD differ. FR contains 70% paper and 30% resin, whereas STD is made up of 50% wood, 20% paper and 30% resin. The resin used for FR does not contain BPA-C.

For placing products in question on the market within the EU/EFTA (with exception of Switzerland) Regulation (EU) No. 305/2001 (/CPR/) applies. The product needs a Declaration of Performance taking into consideration /EN 438 part 7/ version 2005 and CE marking. For the application and use of the product national provisions may apply. Trespa International B.V. has issued such declarations of performance. A certificate of constancy of performance, issued by a third party, is available.

2.2 Application

Trespa® Meteon® products are used in outdoor vertical applications. Types of applications: Façade cladding; balcony panels; sunshades.

In exterior façade applications Trespa® Meteon® (FR & STD grade) is a component of a ventilated façade system. Ventilated façade systems may result in a variety of advantages e.g. energy savings, improving comfort within the building.

Trespa® Meteon® panels can be applied in a number of ways, using different joinery details and fixing systems.

2.3 Technical Data

Assessment rules for High Pressure Laminates are given in guideline /EN 438/, various parts.

Material properties

Name	Value	Unit

Grammage for 8 mm thickness	11.2	kg/m^2
Density [EN ISO 1183]	≥ 1.35	g/cm3
Resistance to impact by large diameter ball / shatter resistance / drop height 1.8 m [EN 438:2 § 21]	≤10	mm
Dimensional stability at elevated temperature [EN 438:2 § 17]	≤ 0,25	%
Resistance to wet conditions / Mass Increase [EN 438:2 § 15]	≤ 3	%
Resistance to wet conditions / Appearance rating [EN 438:2 § 15]	≥ 4	
Flexural modulus [EN ISO 178]	≥ 9000	MPa
Flexural strength [EN ISO 178]	≥ 120	MPa
Resistance to climatic shock / Flexural strength & Flexural modulus index [EN 438:2 § 19]	≥ 0.80	
Resistance to artificial weathering including light fastness for 3.000 hours West European climate [EN 438:2 § 29]	Grey Scale ISO 105-A02 = 4-5	
Resistance to artificial weathering including light fastness for 3.000 hours Florida climate [Trespa method]	Grey Scale ISO 105-A02 = 4-5	

The performance data of the product are in accordance with the Declaration of Performance (issued by Trespa International B.V.) with respect to its Essential Characteristics listed in /EN 438 part 7/ *High Pressure Laminates (HPL) - Sheets based on thermosetting resins (Usually called Laminates) - Compact laminates and HPL composite panels for internal and external wall and ceiling finished.*

2.4 Delivery status

Panel dimensions

Thickness: 6, 8, 10, 13 mm
Length: up to 4270 mm
Width: up to 2130 mm

Trespa® Meteon® (FR & STD grade) panels are available in a wide color and décor range as well as in a variety of finishes.

2.5 Base materials / Ancillary materials

About 70 % of a Trespa® Meteon® (FR & STD grade) panel consist of natural fibers (paper and/or wood); the remaining part consists of cured phenol formaldehyde resins for core layers; the décor (surface) consists of an Electron Beam (EB) cured, pigmented, acrylic layer. Resins used for FR grade panels contain fire retardant additives: type organo phosphor chemicals.

The products under this EPD 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.

No biocides products are added to the products mentioned under this EPD.

2.6 Manufacture

Trespa® Meteon® (FR & STD grade) panels are so called High Pressure Laminates. High pressure laminates are produced in a discontinuous production process. One step covers the production of the core material; another step the production of the decorative décor layer. Core layers and layers of decorative decors are bonded together by using high pressure (> 5 MPa) and high temperature (> 120 °C). This method produces a homogenous, non-porous material.
The manufacturing plant of Trespa in Weert (The Netherlands) is certified against /ISO 9001/ standard.

2.7 Environment and health during manufacturing

The manufacturing plant of Trespa in Weert (The Netherlands) is certified against /ISO 14001/ standard.

2.8 Product processing/Installation

Machining of the panels should only be done by a machining or construction professional with proper equipment. Machining Trespa® Meteon® panels is comparable to machining high quality hardwood. Trespa® Meteon® panels may be machined using carpentry tools. The hardness of Trespa panels makes greater demands on tolls than machining materials composed of softwood. The use of hard metal tools is advised. Diamond-tipped tools are recommended for large series. This ensures a good finish and long tool life.

Serious dangers are inherent with the use of (carpentry) machinery. In all cases, adhere strictly to the guidelines of the machinery manufacturers and the recommendations of the local safety and labor organizations.

2.9 Packaging

Packaging of Trespa® Meteon® panels include:

- wooden pallets
- paper sheets
- polypropylene cover sheets
- polyethylene foil (optional)
- steel strip

Trespa International B.V. recycles and reuses mentioned products as much as possible.

2.10 Condition of use

Under standard conditions of designated use, the construction material does not display any material change during the period of use.

2.11 Environment and health during use

No environmental damage or health risks are to be expected during normal conditions of use.

Once installed, the products shall require no servicing or maintenance other than cleaning during their expected service lives. Water and a soft cloth should be sufficient for cleaning of dusty panels. For more resistive dirt, nonabrasive cleaning agents can be used.

2.12 Reference service life

The reference service life for the Trespa® Meteon® panels is set at 50 years, provided that they are subject to appropriate installation, use and maintenance under normal conditions .
A calculation according ISO 15686 /ISO 15686/ is not applied.

2.13 Extraordinary effects

Fire

Trespa® Meteon® products have been classified according to /EN 13501-1/. Classifications are as follows:

Fire protection

Name	Value
TRESPA® Meteon® STD grade	-
Building material class	D
Burning droplets	s2
Smoke gas development	d0
TRESPA® Meteon® FR grade / thick 6 mm	-
Building material class	B
Burning droplets	s2
Smoke gas development	d0
TRESPA® Meteon® FR grade / thick ≥ 8 mm	-
Building material class	B
Burning droplets	s1
Smoke gas development	d0

Water

The declared products are intended to be used on the exterior of buildings under normal conditions.
Trespa is not aware of any environmental impacts that may be caused by Trespa® Meteon® panels on water quality. It is recommended that the product is exchanged after unforeseen exposure to water, e.g. flooding.

Mechanical destruction

After mechanical destruction, there are no known risks for the environment.

2.14 Re-use phase

Trespa® Meteon® panels are suitable for thermal utilization in officially-approved industrial incineration plants.

2.15 Disposal

Trespa® Meteon® panels can be disposed of in accordance with the EURAL Code 030199 for waste substances in Europe.
There is no specific waste code for High Pressure Laminates from deconstruction in accordance with the European Waste Catalogue.

2.16 Further information

Details with regards to all types of products can be found on www.trespa.com Details with regards to various fixing solutions can be found on www.trespa.info.

3. LCA: Calculation rules

3.1 Declared Unit

In accordance to the PCR the declared unit is 1 m² of product. The Trespa® Meteon® HPL product with 8 mm thickness has an area weight of 11.2 kg/m².

Declared unit

Name	Value	Unit
Declared unit	1	m^2
Grammage	11.2	kg/m^2
Conversion factor to 1 kg	0.09	-

3.2 System boundary

The EPD is of the type "cradle-to-gate" - with options.
Modules A1-A3 include processes that provide materials and energy input for the system, manufacturing and transport processes up to the factory gate, as well as waste processing
In module A5 the End-of-Life scenario of the packaging applied in A1-A3 is modelled.
C3 includes the incineration process with energy substitution with electricity and thermal energy generation.
Module D contains the calculated amount of benefits beyond the system boundaries of the respective product. It is part of the subsequent product system. The benefits of incinerating the packaging material in A5 are also declared in module D.
Production of capital equipment, facilities and infrastructure required for manufacture are outside the scope of this assessment.

3.3 Estimates and assumptions

Further upstream data for the production of base materials are approximated with datasets of similar chemicals or estimated via the merging of existing datasets.

3.4 Cut-off criteria

In the assessment, nearly all available data from production process are considered, i.e. all raw materials used, utilised thermal energy, and electric power consumption using best available LCI datasets. Thus energy flows contributing less than 1% of mass or energy are considered.
Certain chemicals from the decor as well as an auxiliary material from the micro bioreactor are cut off. The cut off materials make up 0,02% of the total material input.

Transportation of the used HPL to the waste incineration plant is neglected.

3.5 Background data

The GaBi LCI database /GaBi ts/ provides the life cycle inventory data for the raw and process materials obtained from the background system. The used database is GaBi 2017, Version 7.3 with service pack 33.

3.6 Data quality

The foreground data collected by the manufacturer are based on yearly production amounts and

extrapolations of measurements on specific machines and plants.
Primary data are collected using a specifically adapted spreadsheet for Trespa® Meteon® HPL. Cross-checks concerning the plausibility of mass and energy flows are carried out on the data received. Similar checks are made on the software model developed during the study. For consistency a cross check with the data from 2012 was made.
Overall the data quality can be described as good. The primary data collection has been done thoroughly. Most of the necessary life cycle inventories for the basic materials are available in the 7.3 database. The last update of the database was 2017.

3.7 Period under review

Primary data was provided by Trespa International B.V. The production data refer to an average of the year 2015.

3.8 Allocation

The overall production of Trespa International B.V. in Weert (The Netherlands) comprises no further products beside the product considered in this study. Data for thermal and electrical energy as well as auxiliary material refer to the declared product. During data collection the allocation is done via mass, area, pieces or time spent in the machine.
An allocation based on the specific calorific value and energy content was carried out among the steam and compressed air co-products in the Trespa Energy Department

In the background data the supply chain for wood chips was modelled using mass allocations from forestry and sawmills. Sawmill inputs and outputs were allocated to individual sawmill products on the basis of price, with price ranges provided based on research into UK sawmills. Feedstock energy (the inherent energy contained in the wood) and sequestered carbon are allocated on a physical basis to the wood.

Production waste is sent to a waste incineration plant. Resulting electrical and thermal energy is looped inside module A1-A3. The quality of the recovered energy is assumed to be the same as that of the input energy.
All applied incineration processes are displayed via a partial stream consideration for the combustion process, according to the specific composition of the incinerated material. For the waste incineration plant an R1-value of >0.6 is assumed.
The benefits for thermal and electrical energy in A5 and D are calculated based on the life cycle inventory of European average data.

3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.
The used background database is GaBi 2017, Version 7.3 with service pack 33.

4. LCA: Scenarios and additional technical information

For packaging mostly wooden pallets and additionally, rejected prepregs from the dry forming process and reused pallets are used. Further packaging materials are plastic foil and sheets as well as steelwire.
It is assumed that all used wooden pallets are reused and looped back.
It should be acknowledged that only the waste is included that incur during packaging within A1-A3. The waste treatment of the packaging itself is modelled in A5.
As the wooden pallets that serve as packaging are reused, only the plastic and steel waste are considered in module A5.
The plastic foil and sheets are fed into an incineration plant. The steel wire is given into metal recycling.

Recovery of packaging material (A5)

Name	Value	Unit
Pallets shipped	1,26	kg/m2 HPL
Steelwire, new	0,02	kg/m2 HPL
PP biplex (cover sheets)	0,076	kg/m2 HPL
PE foil, new	0,013	kg/m2 HPL

End of life (C1-C4; D)

Trespa® Meteon® HPL boards do not reach the end-of-waste state after dismantling in a building.
It is assumed that 100% of post-consumer HPL boards waste is combusted in a European waste incineration plant.
Loads from material incineration are declared in module C3 and resulted energy credits are declared within the module D. The benefits of incinerating the packaging material in A5 are also declared in module D.
Calculation of energy credits generated in the waste incineration plant is based on the calorific value of the HPL (approx. 18 MJ/kg). CO2 balance was checked.

Name	Value	Unit
Energy recovery	11.2	kg

5. LCA: Results

The following tables show the results of the environmental impact assessment. The results differenciate between the CML environmental impact categories (CML 2001 - Apr. 2013), the use of resources, output flows and waste categories. All numbers refer to the functional unit of 1m² HPL.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse- Recovery- Recycling- potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	X	MND	MND	MNR	MNR	MNR	MND	MND	MND	MND	X	MND	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1 m² Trespa Meteon

Parameter	Unit	A1-A3	A5	C3	D
Global warming potential	[kg CO_2-Eq.]	1.37E+1	1.55E-1	1.63E+1	-3.84E+0
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	8.26E-9	-7.11E-14	3.89E-12	-7.38E-11
Acidification potential of land and water	[kg SO_2-Eq.]	6.07E-2	-4.62E-5	4.82E-3	-6.04E-3
Eutrophication potential	[kg $(PO_4)^{3-}$-Eq.]	9.71E-3	-3.57E-6	9.57E-4	-6.35E-4
Formation potential of tropospheric ozone photochemical oxidants	[kg ethene-Eq.]	6.03E-3	-1.11E-5	2.83E-4	-5.70E-4
Abiotic depletion potential for non-fossil resources	[kg Sb-Eq.]	4.45E-5	1.44E-8	4.93E-7	-7.50E-7
Abiotic depletion potential for fossil resources	[MJ]	5.38E+2	-1.56E-1	5.35E+0	-5.35E+1

RESULTS OF THE LCA - RESOURCE USE: 1 m² Trespa Meteon

Parameter	Unit	A1-A3	A5	C3	D
Renewable primary energy as energy carrier	[MJ]	1.89E+2	2.47E-2	1.11E+2	-9.94E+0
Renewable primary energy resources as material utilization	[MJ]	1.10E+2	0.00E+0	-1.10E+2	0.00E+0
Total use of renewable primary energy resources	[MJ]	2.99E+2	2.47E-2	8.23E-1	-9.94E+0
Non-renewable primary energy as energy carrier	[MJ]	4.61E+2	2.93E+0	1.00E+2	-6.50E+1
Non-renewable primary energy as material utilization	[MJ]	9.72E+1	-3.07E+0	-9.41E+1	0.00E+0
Total use of non-renewable primary energy resources	[MJ]	5.58E+2	-1.38E-1	6.14E+0	-6.50E+1
Use of secondary material	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	[MJ]	4.15E+1	0.00E+0	0.00E+0	0.00E+0
Use of non-renewable secondary fuels	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of net fresh water	[m³]	4.03E-1	4.29E-4	4.10E-2	-1.42E-2

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: 1 m² Trespa Meteon

Parameter	Unit	A1-A3	A5	C3	D
Hazardous waste disposed	[kg]	3.19E-5	1.67E-10	2.20E-8	-1.60E-8
Non-hazardous waste disposed	[kg]	1.52E+0	1.70E-2	1.33E+0	-2.38E-2
Radioactive waste disposed	[kg]	7.71E-3	6.90E-6	3.15E-4	-4.54E-3
Components for re-use	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	[kg]	0.00E+0	1.43E-2	0.00E+0	0.00E+0
Materials for energy recovery	[kg]	0.00E+0	0.00E+0	1.12E+1	0.00E+0
Exported electrical energy	[MJ]	0.00E+0	-3.46E-1	1.27E+1	0.00E+0
Exported thermal energy	[MJ]	0.00E+0	-7.96E-1	3.21E+1	0.00E+0

The carbon content from renewable raw materials in the product is 12 kg CO_2-Eq.

6. LCA: Interpretation

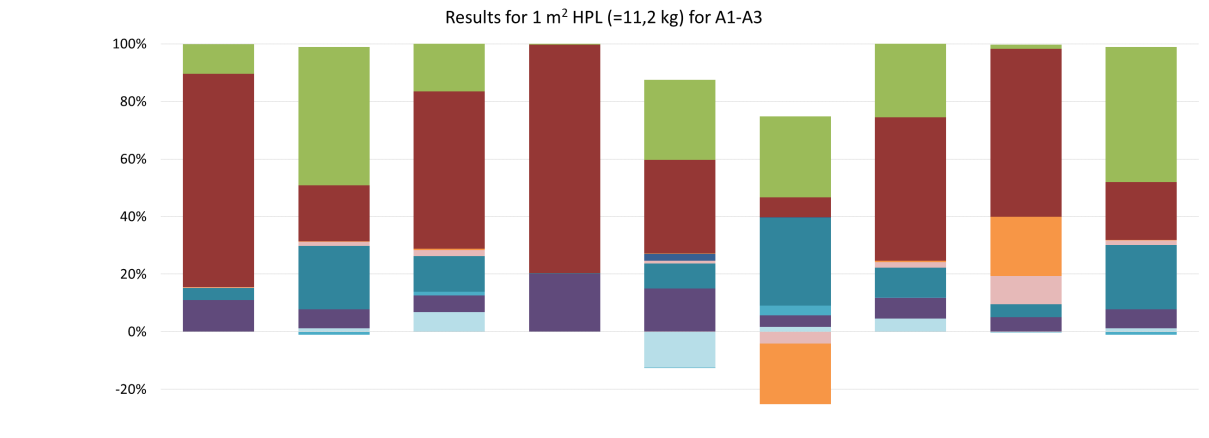
The interpretation is based on the assumptions and restrictions concerning the methods and data, which were displayed in this background report. For the interpretation a dominance analysis was conducted. This short overview of the main sources of environmental impacts (Figure 1) for an average product shows that a high share of the impacts comes from the production of the used raw materials. In almost all impact categories the main contributors are resin and/or paper, whereas the impacts of paper are mostly dominating. This needs to be kept in mind when looking at the different compositions of the Trespa® Meteon® FR and STD. As mentioned in chapter 2.1 FR only contains paper and no wood chips. Hence, the impact categories that are dominated by the paper production are assumed to have accordingly higher results.

In all impact categories, except for POCP, around 50% of the resin's contribution origins from BPA-C. This material is only used in Trespa® Meteon® STD with a share of around 30% of the resin. The results for FR in the categories dominated by the resin are assumed to be accordingly lower.

In the following, the term "additional materials" refers to all resources, auxiliary materials and additives that additionally are used during the production process of

1 m2 HPL (e.g. caustic soda, chemicals in the décor department or polster sheets in panel assembly). In comparison with paper and resin, those additional materials have a contribution of less than 20% in all categories.

The Ozone Depletion Potential (ODP) is clearly dominated by the paper production with almost 100%. Hereby almost 80% are caused by the auxiliary chemicals for pulp and paper production. Around 14% of the ODP origin from additional kraft paper that is used in the panel assembly and is listed as additional material. Here the ODP mainly derives from non-ionic surfactants used as auxiliary chemicals in the paper production.



	ADP elements [kg Sb-Equiv.]	ADP fossil [MJ]	EP [kg Phosphate-Equiv.]	ODP, steady state [kg R11-Equiv.]	POCP [kg Ethene-Equiv.]	GWP 100 years [kg CO2-Equiv.]	AP [kg SO2-Equiv.]	PE ren	PE non ren
Resin	10,3	49,1	16,6	0,3	37,2	56,7	25,5	1,6	48,0
Paper	74,4	19,9	54,5	79,3	43,3	14,1	49,9	58,5	20,4
Wood chips	0,0	0,1	0,5	0,0	0,1	-42,2	0,4	20,8	0,1
Production	0,0	0,0	0,0	0,0	3,4	0,3	0,0	0,0	0,0
Packaging	0,3	1,6	2,2	0,0	1,2	-8,3	2,0	9,8	1,6
Energy	4,1	22,5	12,4	0,1	11,6	61,2	10,3	4,5	22,9
Disposal	-0,2	-1,1	1,3	0,0	-0,2	6,9	0,2	-0,2	-1,1
Additional materials	11,0	6,7	5,7	20,2	20,1	8,1	7,3	5,0	6,8
Transport	0,1	1,2	6,9	0,0	-16,6	3,3	4,5	0,1	1,1

Figure 1: Dominance analysis for modules A1 - A3 of the HPL

Transport has a negative potential concerning the Photochemical Ozone Creation Potential (POCP). This is due to the calculation approach, which assumes that certain emissions from transportation lower the POCP impact chemically. Around 80% of the resin's contribution to the POCP originates from the BPA-C that is only used in Trespa® Meteon® STD. Hence the POCP for FR is assumed to be accordingly lower. Additional materials contribute 20% to the POCP, with 14% coming from the various pigments used in the décor department. As the dataset used for these materials is a proxy this value should be treated with caution.

The Global Warming Potential (GWP) is dominated by the energy generation (40%). The graphic shows the sequestered biogenic CO2 from the wood chips (in orange). This CO2 will be released during the incineration of the HPL in C3.

Waste and packaging have a rather small impact in all categories.

Biogenic carbon balance
The overall CO2 entering the system in form of biogenic carbon bound to wood and paper amounts 22 kg. 10 kg of CO2 are released during the production in form of production waste. The remaining CO2 is stored in the product and leaves the system during its incineration in module C3.

Primary Energy
Figure 2 shows the primary energy demand for the functional unit.

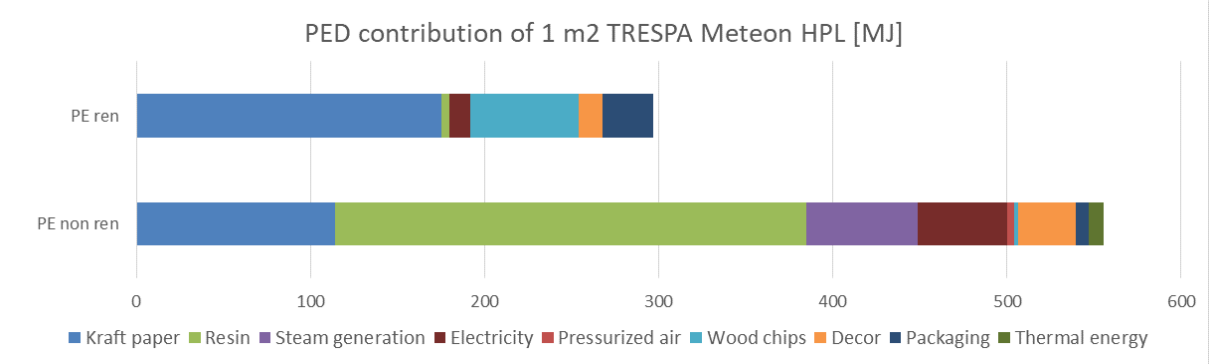


Figure 2: PED contribution for 1m2 HPL divided in renewable and non renewable

The renewable PED is dominated by the kraft paper and the wood chips. The PERM with around 110 MJ originates from the wood and paper. The PERE is 190 MJ.
The highest share of the primary energy from non-renewable materials originates from the resin. Kraft paper, steam generation and electricity consumption as well as the décor department mainly contribute to the remaining demand. The PENRM of 97 MJ originates from the resin (94 MJ) and the plastic packaging (3 MJ). The PENRE is 460 MJ.

PERM - Renewable primary energy as material utilization
PERE - Renewable primary energy as energy carrier
PENRM - Non-renewable primary energy as material utilization
PENRE - Non-renewable primary energy as energy carrier

7. Requisite evidence

7.1 Total migration
Measurement to the standard series EN 1186, Limit values as per the German Consumer Goods Ordinance (2005) and EU Directive 10/2011/EC. Not applicable to Trespa® Meteon® products as the intended use is façade application.

7.2 Leaching
No leaching test have been performed.

7.3 Formaldehyde
Formaldehyde emission levels of Trespa® Meteon® FR grade and Standard grade products comply with the requirements of Class E1 in accordance with /EN 717-1/. Factory control testing is based on /EN 717-2/.

8. References

/CPR/
Regulation (EU) No 305/2011 (Construction Products Regulation, or /CPR/) of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
/DIN CEN/TS 13130-23/
/DIN CEN/TS 13130-23:2005-05/, Materials and articles in contact with foodstuffs — Plastics substances subject to limitation - Part 23: Determination of formaldehyde and hexamethylenetetramine in food simulants
/DIN CEN/TS 13130-27/
/DIN CEN/TS 13130-27:2005-05/, Materials and articles in contact with foodstuffs — Plastics substances subject to limitation - Part 27: Determination of 2,4,6-triamino-1,3,5-triazine in food simulants
/Directive 10/2011/EC/
Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food
/Directive 2010/75/EU/
/Directive 2010/75/EU/ of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
/EN 438-2/
/EN 438-2:2016-06/, High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 2: Determination of properties
/EN 438-6/
/EN 438-6:2016-06/, High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 6 : Classification and specifications for Exterior-grade compact laminates of thickness 2 mm and greater
/EN 438-7/
/EN 438-7:2005-04/, High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 7: Compact laminate and HPL composite panels for internal and external wall and ceiling finishes
/EN 717-1/
/EN 717-1:2005-01/, Wood-based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method
/EN 1186/
/EN 1186:2002-07/, Materials and articles in contact with foodstuffs - Plastics
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