# EPD

Generic EPD developed by ERFMI based on EN 16810, EN ISO 14025 and EN 15804 applicable for below Tarkett products

- Aquarelle wet room floor (2 m)
- Aquarelle XL floor (3 m & 4 m)



## **ENVIRONMENTAL PRODUCT DECLARATION**

#### as per /EN 16810/ and as per /ISO 14025/ and /EN 15804/

Owner of the Declaration	ERFMI - European Resilient Flooring Manufacturers' Institute
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
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Issue date	05/03/2019
Valid to	04/03/2024

## Heterogeneous polyvinyl chloride floor coverings according to EN ISO 10582 ERFMI European Resilient Flooring Manufacturers' Institute





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## ERFMI- European Resilient Flooring Manufacturers' Institute

#### Programme holder

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

#### Declaration number

#### EPD-ERF-20180177-CCI1-EN

This declaration is based on the product category rules: Floor coverings, 02/2018 (PCR checked and approved by the SVR)

## **Issue date** 05/03/2019

Valid to 04/03/2024

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

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Dr. Alexander Röder (Head of Board IBU)

#### Heterogeneous polyvinyl chloride floor coverings according to EN ISO 10582

#### Owner of the declaration

ERFMI vzw, European Resilient Flooring Manufacturers' Institute 24, Rue Montoyer B-1000 Brussels

#### Declared product / declared unit

1m<sup>2</sup> heterogeneous polyvinyl chloride floor covering

#### Scope:

In this EPD homogeneous polyvinyl chloride floor coverings according to ISO 10581 floor coverings are declared. The application of this EPD is restricted to homogeneous polyvinyl chloride floor coverings produced by the members of the European Resilient Flooring Manufacturers' Institute (ERFMI). Data are based upon production during 2017 in Europe. Data have been provided by 6 companies of ERFMI which represent 100% of ERFMI members.

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 standard /EN 15804/ serves as the core PCR Independent verification of the declaration and data according to /ISO 14025:2010/ internally x externally

Prof. Dr. Birgit Grahl (Independent verifier appointed by SVR)

#### Product

#### **Product description / Product definition**

Resilient floor coverings are an entire product family of flexible flooring solutions available in sheet, tiles and planks. It is classified in heterogeneous or homogeneous composition based on plastic, linoleum, cork or rubber. Resilient floor coverings can provide different functionalities (acoustic, static control, slip resistance, easy maintenance etc.) to match a wide range of domestic, commercial and industrial applications. It is available in an enormous range of patterns and colours fitting with inspiration and decorative needs.

Heterogeneous polyvinyl chloride floor coverings consist of a wear layer and other compact layers which differ in composition and/or design and can contain reinforcement.

For the placing on the market of the product in the EU/EFTA (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration /EN 14041:2004/AC 2006 Resilient, textile and laminate floor coverings. Essential Characteristics/ and the CE-marking. For the application and use the respective national provisions apply.

#### Application

According to /EN ISO 10874/ the area of application for resilient floor coverings is indicated by use classes. The declared product group covers the use classes 23, 34, 43.

#### **Technical Data**

The following table contains the construction data of the declared product group:

#### **Constructional data**

Name	Value	Unit
Product thickness	2.1	mm
Surface weight	2.75	kg/m²
Product Form	sheet	-

The data gaiven in the Declaration of Performance apply.



#### **Base materials / Ancillary materials**

The product group has the following composition:

- Additives 2%
- Filler 26%
- Plasticizer 19%
- Pigments <1%
- Polymers (PVC) 39%
- Auxiliaries 1%
- Lacquer <1%
- Flooring Recyclate (PVC) 12%

common number. For this EPD model the reference service lifetime (RSL) is set to one year. This means that all impacts for the use phase are based on the cleaning and maintenance model for one year. Depending on the area of use based on /EN ISO 10874/, the technical lifetime advised by the manufacturer and the estimated time of the floor by the customer, the service lifetime can be determined. The use phase impacts should be calculated with the foreseen service life to arrive at the total environmental impact /EN 16810/.

ERFMI provides an online tool for the calculation of a specific service life on the ERFMI home page (www.erfmi.com) for the end-user.

#### **Reference service life**

The service lifetime of a floor covering for a certain application on a floor is too widespread to give one

#### LCA: Calculation rules

#### **Declared Unit**

1m<sup>2</sup> of floor covering.

#### **Declared unit**

Name	Value	Unit
Declared unit	1	m <sup>2</sup>
Declared unit	2.75	kg/m²
Conversion factor to 1 kg	0.364	-

The declaration refers to an average product from 10 production sites of ERFMI members. The data have been weighted according to the annual square meters produced by each site. The life cycle impact assessment is conducted based on the vertical average.

#### System boundary

Type of EPD: cradle to grave

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.

Module A4 includes transport of the floor covering to the place of installation.

Module A5 includes the production of offcuts and adhesive for the installation of the floor covering, and incineration of offcuts and packaging material.

Module B2 is including provision of cleaning agent, energy and water consumption for the cleaning of the floor covering incl. waste water treatment. The LCA results in this EPD are declared for a one-year usage.

Module C1 considers electricity supply for the deconstruction of the flooring.

Module C2 includes transportation of the postconsumer waste to waste processing.

End of life scenarios are declared for:

- 100% incineration in a waste incineration plant (WIP) (Scenario 1, C3/1)
- 100% landfilling (Scenario 2, C4/2)
- 100% recycling according to information from AgPR, (Arbeitsgemeinschaft PVC-Bodenbelag Recycling) (Scenario 3 - for the recycling scenario the end of waste state is reached after removal from the building)

Module D includes potential benefits from all net flows given in module A5 and C3 that leave the product boundary system after having passed the end-of-waste state in the form of recovery and/or recycling potentials. Module D is declared for each scenario separately.

#### 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.

As background database /GaBi ts/ is used.

#### LCA: Scenarios and additional technical information

The following technical information is a basis for the declared modules

#### Transport to the construction site (A4)

Name	Value	Unit
Transport distance	2000	km
Capacity utilisation (including empty runs)	85	%

#### Installation in the building (A5)

Name	Value	Unit
Material loss (installation waste)	6	%
Auxiliary (adhesive)	0.3	kg

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Biogenic carbon incorporated in the packaging material is released as  $CO_2$  emissions in module A5.

#### Maintenance (B2)

Name	Value	Unit
Water consumption	0.003	m <sup>3</sup>
Electricity consumption	0.55	kWh
Maintenance cycle (vacuum cleaning	156	number/
& wet cleaning)	150	а
Auxiliary (detergent)	0.04	kg

#### End of Life (C1-C4)

Name	Value	Unit
Energy recovery [100%, Scenario 1]	2.75	kg
Landfilling [100%, Scenario 2]	2.75	kg
Recycling [100%, Scenario 3]	2.75	kg

## Reuse, recovery and/or recycling potentials (D), relevant scenario information

For module D the potential benefits given in module A5 and C3 are declared. For waste incineration combustion in a WIP (R1 > 0.6) with energy recuperation is considered.



### LCA: Results

The results for module B2 refer to a period of one year. For the calculation of the impact of B2 for a certain service life the values for B2 have to be multiplied by the estimated service life in years.

ERFMI provides an online tool for this calculation on the ERFMI home page (www.erfmi.com ) for the end-user. Scenario 1 applies to 100% incineration.

Scenario 2 applies to 100% landfilling.

Scenario 3 applies to 100% recycling.

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PERM PERT PENRE PENRI SM RSF NRSF FW Caption RESUL 1 m <sup>2</sup> he Paramete HWD	I I I I I I I I I I I I I I I I I I I	MJ] MJ] MJ] MJ] MJ] MJ] MJ] MJ]	13.74 1.80 15.54 95.47 46.10 141.57 0.00 IND IND 2.66E-2 Use of rerrimary energy wable print rimary energy y material; IE LCA ous po	0.2 0.0 0.2 3.5 0.0 3.5 0.0 INE 3.611 newable ergy res mary er ergy res mary er er ergy res er er er er er er er er er er	0 0 0 0 6 0 6 0 0 5 0 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5	4.34 -0.87 3.47 19.17 -0.19 18.98 0.00 IND IND IND IND IND IND IND IND IND IND	1.59 0.00 1.59 5.13 0.00 5.13 0.00 IND IND 2.47E-3 excludin raw mate oon-rene raw mate le secon <b>(S ANI</b> <b>0.00</b> <b>0.00</b> <b>0.00</b> <b>0.00</b> <b>1.59</b> 5.13 0.00 <b>1.59</b> 5.13 0.00 <b>1.59</b> 5.13 0.00 <b>1.59</b> 5.13 0.00 <b>1.59</b> 5.13 0.00 <b>1.59</b> 5.13 0.00 <b>1.59</b> 5.13 0.00 <b>1.59</b> 5.13 0.00 <b>1.59</b> <b>5.13</b> 0.00 <b>1.59</b> <b>5.13</b> 0.00 <b>1.59</b> <b>5.13</b> 0.00 <b>1.59</b> <b>5.13</b> 0.00 <b>1.59</b> <b>5.13</b> 0.00 <b>1.59</b> <b>5.13</b> 0.00 <b>1.59</b> <b>5.13</b> <b>0.00</b> <b>1.59</b> <b>5.13</b> <b>0.00</b> <b>1.59</b> <b>1.59</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.51</b> <b>1.511.51</b> <b>1.51</b> <b>1.511.51</b> <b>1.511.511.511.511.511.511.511.511.511.511.511.511.511.511.511.511.511.511.511.5</b>	(( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	0.09 0.00 0.23 0.00 0.23 0.00 IND IND 16E-4 IND 16E-4 IND 16E-4 IND 16E-4 IND IND 16E-4 IND IND IND IND IND IND IND IND IND IND	0.02 0.00 0.02 0.35 0.00 0.35 0.00 IND IND 3.53E-5 rimary ene Total use energy res = Total use SF = Use er C1 C2 2.01E-8	2.74 -1.8 0.99 51.7 -46.3 0.00 INC 1.17E ergy resc of renew sources e of nor- of non-r	5 0 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0	0.22 0.00 0.22 2.91 0.00 2.91 IND IND IND -7.47E-6 u used as r primary er as raw ma wable prin able secon	-3.17 0.00 -3.17 -19.09 0.00 -19.09 0.00 IND IND -4.33E- raw mate bergy rest terials; P hary ener dary fuel	-0 0. -0 -1 0. -1 0. -1 0. -1 0. -1 0. -1 0. -1 0. -1 0. -1 9 -5.92	.25 00 .25 .48 00 .48 00 .48 00 .10 .10 .5E-4 .10 .5E-4 .10 .10 .10 .10 .10 .10 .10 .10 .10 .10	-0.25 0.00 -0.25 -1.48 0.00 -1.48 2.75 IND IND -3.45E-4 Use of E = Use of of non- SM = Us of net fres	
PERM PERT PENRE PENRI SM RSF NRSF FW Caption Caption <b>RESUL</b> 1 m <sup>2</sup> he Paramete HWD	I I I I I I I I I I I I I I I I I I I	MJ]   FRE = I   wable proon-rene   opgene   OF TH   oggene   Unit   [kg]   [kg]	13.74 1.80 15.54 95.47 46.10 141.57 0.00 IND IND 2.66E-2 Use of rerrimary energy wable print rimary energy wable print trimary energy te LCA ous po A1-A3 4.81E-6 3.17E-1	0.2 0.0 0.2 3.5 0.0 0.0 INE 3.611 newable ergy res mary er ergy res (RSF = - OU Iyvin A4 2.061 2.981	0 0 0 0 6 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0	4.34 -0.87 3.47 19.17 -0.19 18.98 0.00 IND IND IND IND IND IND IND IND IND IND	1.59 0.00 1.59 5.13 0.00 5.13 0.00 IND IND 2.47E- excludin raw mate on-rene raw mate on-rene raw mate on-rene <b>B2</b> 2.43E- 8.38E-	(() () () () () () () () () () () () ()	0.09 0.00 0.09 0.23 0.00 0.23 0.00 IND IND 16E-4 wable pr PERT = PERT = PERT = PERT = Variable of the second PERT = PERT = P	0.02 0.00 0.02 0.35 0.00 0.35 0.00 IND IND 3.53E-5 rimary ene Total use energy res Total use sF = Use energy res <b>C2</b> 2.01E-8 2.91E-5	2.75 -1.8 0.99 51.7 -46.3 0.00 INE INE 1.17E ergy ress of renew sources e of nor- of non-rr <b>ORIES</b> 2.09E 2.09E	5 9 9 0 	0.22 0.00 0.22 2.91 0.00 2.91 IND IND -7.47E-6 u used as r primary er as raw ma wable prin able secon	-3.17 0.00 -3.17 -19.09 0.00 -19.09 0.00 IND IND -4.33E- raw mate hergy rest terials; P hary ener dary fuel <b>D/1</b> -7.61E- -7.41E	-0 0. -0 -0 -1 0. 1 -1 0. 	.25 00 .25 .48 00 .48 00 .5E-4 .7 .5E-4 .7 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	-0.25 0.00 -0.25 -1.48 0.00 -1.48 2.75 IND IND -3.45E-2 Use of res = Use of of non- SM = Us of net fres <b>D/3</b> -5.92E-1 -5.86E-2	
PERM PERT PENRE PENRI SM RSF NRSF FW Caption RESUL 1 m <sup>2</sup> he Paramete HWD NHWD RWD	I I I I I I I I I I I I I I I I I I I	Image: Margin of the second	13.74 1.80 15.54 95.47 46.10 141.57 0.00 IND IND 2.66E-2 Use of rer rimary ene wable prin rimary ene wable prin rimary ene wable prin rimary ene trimary ene	0.2 0.0 0.2 3.5 0.0 3.5 0.0 INE 3.611 newable ergy res mary er ergy res (RSF = - OU lyvin) A4 2.066 2.981 4.871	0 0   0 0   0 0   6 0   0 0   6 0   0 0	4.34 -0.87 3.47 19.17 -0.19 18.98 0.00 IND IND IND 4.08E-3 ry energy used as ccluding r is used as renewab FLOW oride fl A5 3.46E-7 .51E-1 3.55E-4	1.59 0.00 1.59 5.13 0.00 5.13 0.00 IND IND 2.47E-: excludin raw mate bion-rene raw mater bion-rene raw mater bion-rene raw mater bion-rene raw mater bion-rene raw mater bion-rene bion-rene bion-rene bion-rene raw mater bion-rene raw mater bion-rene raw mater bion-rene bion-re	(() () () () () () () () () () () () ()	0.09 0.09 0.09 0.23 0.00 0.23 0.00 IND IND IND IND IGE-4 wable pr PERT = primary e PENRT = uels; NRS wate ASTE C ng (2.7 C1 0.7E-10 60E-4 77E-5	0.02 0.00 0.02 0.35 0.00 0.35 0.00 IND IND IND 3.53E-5 imary ene Total use energy res = Total use SF = Use er <b>ATEGO</b> <b>5 kg/m<sup>2</sup></b> <b>6 kg/m<sup>2</sup></b> <b>6 kg/m<sup>2</sup></b> <b>6 kg/m<sup>2</sup></b> <b>7 kg/m<sup>2</sup></b> <b>6 kg/m<sup>2</sup></b> <b>7 kg/m<sup>2</sup> <b>7 kg/m<sup>2</sup></b> <b>7 kg/m<sup>2</sup> <b>7 kg/m<sup>2</sup></b> <b>7 kg/m<sup>2</sup></b> </b></b>	2.75 -1.8 0.99 51.7 -46.3 5.69 0.000 INE INE 1.17E of renew sources e of non-r of non-r <b>ORIES</b> 2.09E 2.28E	0 0   0 0	0.22 0.00 0.22 2.91 0.00 2.91 0.00 IND IND -7.47E-6 sused as r primary er as raw ma wable prim able secon C4/2 1.24E-8 2.74E+0 4.13E-5	-3.17 0.00 -3.17 -19.09 0.00 -19.09 0.00 IND IND -4.33E- raw mate hergy results terials; P nary ener terials; P nary ener dary fuel <b>D/1</b> -7.61E- -7.41E- -1.39E-	-0 0. -0 -1 0. -1 -1 0. -1 -1 0. -1 -1 0. -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	.25 .00 .25 .48 .00 .48 .00 .10 .10 .10 .5E-4 .05 .5E-4 .05 .05 .05 .05 .05 .05 .05 .05 .05 .05	-0.25 0.00 -0.25 -1.48 0.00 -1.48 2.75 IND IND IND -3.45E-4 Use of rest SM = Use of non- SM = Use of net fres <b>D/3</b> -5.92E-1 -5.86E-4 -1.11E-4	
PERM PERT PENRE PENRE SM RSF FW Caption Caption RESUL 1 m <sup>2</sup> ho Paramete HWD NHWD RWD CRU KWD	I I I I I I I I I I I I I I I I I I I	MJ]   FRE = I   wable proon-rene   opgene   OF TH   oggene   Unit   [kg]   [kg]	13.74 1.80 15.54 95.47 46.10 141.57 0.00 IND IND 2.66E-2 Use of rerrimary energy wable printing energy wable printing energy wable printing energy wable printing energy wable printing energy wable printing energy <b>1E LCA</b> <b>0.00</b> <b>A1-A3</b> 4.81E-6 3.17E-1 3.75E-3 IND IND IND	0.2 0.0 0.2 3.5 0.0 3.5 0.0 1NE INE 3.611 newable ergy res ergy res RSF = - OU lyviny A4 2.06i 2.98i 4.877 INE 1NE 1NE 1NE 1NE 1NE 1NE 1NE 1	0 0   0 0   0 0   6 0   0 0   6 0   0 0   0 0   6 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0	4.34 -0.87 3.47 19.17 -0.19 18.98 0.00 IND IND IND iND iND iND iND iND iND iND iND iND i	1.59 0.00 1.59 5.13 0.00 5.13 0.00 IND IND 2.47E-3 excludin raw mate boor coor B2 2.43E-1 8.38E-3 7.02E-1 IND IND	0 0   0 0	0.09 0.09 0.09 0.23 0.00 0.23 0.00 0.23 0.00 IND IND IND IND IND IND IND IND	0.02 0.00 0.02 0.35 0.00 0.35 0.00 IND IND 3.53E-5 rimary ene Total use energy rese = Total use energy rese = Total use er <b>CATEGO</b> <b>5 kg/m<sup>2</sup></b> <b>2.01E-8</b> 2.91E-5 4.75E-7 IND IND	2.75 -1.8 0.99 51.7 -46.' 5.60 0.00 INE INE 1.17E ergy resc of renew sources e of non-r of non-r ORIES 2.09E 2.28E INE INE	5 0   5 0   5 9   0 0   3 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0	0.22 0.00 0.22 2.91 0.00 2.91 0.00 IND IND -7.47E-6 a used as r primary er as raw ma wable prim able secon <b>C4/2</b> 1.24E-8 2.74E+0 4.13E-5 IND IND IND	-3.17 0.00 -3.17 -19.09 0.00 -19.09 0.00 IND IND -4.33E- raw mate hergy reseterials; P hary ener idary fuel <b>D/1</b> -7.61E- -7.41E- -7.41E- 1.39E- IND IND	0 0. -0 -0 -1 0. -1 -1 0. -1 -1 0. -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	25 00 25 48 00 48 00 10 10 55 4 8 RM = PENR FUR	-0.25 0.00 -0.25 -1.48 0.00 -1.48 2.75 IND IND -3.45E-2 Use of E = Use of of non- SM = Us of net fres <b>D/3</b> -5.92E-1 -5.86E-2 -1.11E-2 IND 2.75	
PERM PERT PENRE PENRI SM RSF NRSF FW Caption RESUL 1 m <sup>2</sup> ho Paramete HWD NHWD RWD CRU MFR MER	I I I I I I I I I I I I I I I I I I I	Image: Market	13.74 1.80 15.54 95.47 46.10 141.57 0.00 IND 2.66E-2 Use of rerrimary energy wable printimary energy wable printimary energy wable printing the LCA outs po A1-A3 4.81E-6 3.17E-1 3.75E-3 IND IND IND IND	0.2 0.0 0.2 3.5 0.0 3.5 0.0 INE 3.611 newable ergy res mary er ergy res RSF = - OU Iyviny A4 2.066 2.981 4.871 INE INE INE INE INE INE INE INE	0 0 0 0 6 0 6 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0	4.34 -0.87 3.47 19.17 -0.19 18.98 0.00 IND IND IND iND iND iND sused as renewab FLOW oride fl 8.46E-7 .51E-1 8.55E-4 IND IND IND	1.59 0.00 1.59 5.13 0.00 5.13 0.00 IND 2.47E- excludin raw mate oon-rene raw mate le secon /S ANI oor cc B2 2.43E- 8.38E- 7.02E- 1ND IND IND	()   ()	0.09 0.09 0.09 0.23 0.00 0.23 0.00 IND IND IND IND IND IND IND IND	0.02 0.00 0.02 0.35 0.00 0.35 0.00 IND IND 3.53E-5 rimary ene Total use energy rese = Total use sF = Use er <b>CATEGO</b> 5 kg/m <sup>2</sup> <b>C2</b> 2.01E-8 2.91E-5 4.75E-7 IND IND IND	2.75 -1.8 0.99 51.7 -46.5 5.66 0.00 INE 1.17E argy resc of renew sources e of nor- of non-r <b>DRIES</b> 2.09E 2.28E 2.09E 2.28E INE 2.09E 2.28E INE	5 0   5 9   0 0   3 0   3 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   5 0   6 0   6 0	0.22 0.00 0.22 2.91 0.00 2.91 0.00 IND -7.47E-6 used as r primary er as raw ma wable prin able secon 1.24Z 1.24E-8 2.74E+0 4.13E-5 IND IND IND	-3.17 0.00 -3.17 -19.09 0.00 -19.09 0.00 IND -4.33E- raw mate hergy ress terials; P hary ener dary fuel -7.61E- -7.41E- -7.41E- -1.39E- IND IND 2.75	0 0. -0 -0 -1 0. -1 -1 0. -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	25 00 225 48 00 48 00 10 10 55E-4 8 RM = PENR = Use of Use of 22E-10 66E-4 1E-4 10 10 10 10 10 10 10 10 10 10 10 10 10	-0.25 0.00 -0.25 -1.48 0.00 -1.48 2.75 IND -3.45E-4 Use of E = Use of of non- SM = Us SM = Us of net fres <b>D/3</b> -5.92E-1 -5.86E-4 -1.11E-4 IND 2.75 IND	
PERM PERT PENRE PENRE SM RSF FW Caption Caption Paramete HWD NHWD RWD CRU KWP CRU	I I I I I I I I I I I I I I I I I I I	[MJ]   [M]   [	13.74 1.80 15.54 95.47 46.10 141.57 0.00 IND IND 2.66E-2 Use of rerrimary energy wable printing energy wable printing energy wable printing energy wable printing energy wable printing energy wable printing energy <b>1E LCA</b> <b>0.00</b> <b>A1-A3</b> 4.81E-6 3.17E-1 3.75E-3 IND IND IND	0.2 0.0 0.2 3.5 0.0 3.5 0.0 1NE INE 3.611 newable ergy res ergy res RSF = - OU lyviny A4 2.06i 2.98i 4.877 INE 1NE 1NE 1NE 1NE 1NE 1NE 1NE 1	0 0   0 0   0 0   6 0   0 0   6 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0	4.34 -0.87 3.47 19.17 -0.19 18.98 0.00 IND IND IND iND iND iND iND iND iND iND iND iND i	1.59 0.00 1.59 5.13 0.00 5.13 0.00 IND IND 2.47E-3 excludin raw mate boor coor B2 2.43E-1 8.38E-3 7.02E-1 IND IND	0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0   0 0	0.09 0.09 0.09 0.23 0.00 0.23 0.00 0.23 0.00 IND IND IND IND IND IND IND IND	0.02 0.00 0.02 0.35 0.00 0.35 0.00 IND IND 3.53E-5 rimary ene Total use energy rese = Total use energy rese = Total use er <b>CATEGO</b> <b>5 kg/m<sup>2</sup></b> <b>2.01E-8</b> 2.91E-5 4.75E-7 IND IND	2.75 -1.8 0.99 51.7 -46.' 5.60 0.00 INE INE 1.17E ergy resc of renew sources e of non-r of non-r ORIES 2.09E 2.28E INE INE		0.22 0.00 0.22 2.91 0.00 2.91 0.00 IND IND -7.47E-6 a used as r primary er as raw ma wable prim able secon <b>C4/2</b> 1.24E-8 2.74E+0 4.13E-5 IND IND IND	-3.17 0.00 -3.17 -19.09 0.00 -19.09 0.00 IND IND -4.33E- raw mate hergy reseterials; P hary ener idary fuel <b>D/1</b> -7.61E- -7.41E- -7.41E- 1.39E- IND IND	0 0. -0 -1 0. -1 -1 0. -1 -1 0. -1 -1 0. -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	25 00 25 48 00 48 00 10 10 55 4 8 RM = PENR FUR	-0.25 0.00 -0.25 -1.48 0.00 -1.48 2.75 IND IND -3.45E-2 Use of E = Use of of non- SM = Us of net fres <b>D/3</b> -5.92E-1 -5.86E-4 -1.11E-2 IND 2.75	



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