# **ENVIRONMENTAL PRODUCT DECLARATION**

as per ISO 14025 and EN 15804

Owner of the Declaration	Desso BV
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-DES-20130057-CBD1-EN
Issue date	08/05/2013
Valid to	07/05/2018

Tufted carpet tiles Pile material 800-900 g/m<sup>2</sup> polyamide 6 with 100 % recycled content and a modified bitumen backing Desso<sup>®</sup>



www.bau-umwelt.com / https://epd-online.com





# **General Information**

Desso®

#### Programme holder

IBU - Institut Bauen und Umwelt e.V. Rheinufer 108 D-53639 Königswinter

# Declaration number

EPD-DES-20130057-CBD1-EN

# This Declaration is based on the Product Category Rules:

Floor coverings, 07-2012 (PCR tested and approved by the independent expert committee)

**Issue date** 08/05/2013

Valid to 07/05/2018

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

Prof. Dr.-Ing. Hans-Wolf Reinhardt (Chairman of SVA)

# Product

#### **Product description**

Tufted carpet tiles with a surface pile of solution-dyed polyamide 6 with 100% recycled content, and a modified bitumen backing.

The declaration applies for a group of products with a total pile-material input of 800-900 g/m<sup>2</sup>.

The calculations refer to the average pile-material input of 850 g.

The recycled content out of total weight amount to 19,3%.

#### Application

According to the use class as defined in EN 1307 the products can be used in all professional area which require **class 33** or less.

## Tufted carpet tiles Pile material 800-900 g/m<sup>2</sup> polyamide 6 with 100 % recycled content and a modified bitumen backing

#### Owner of the Declaration

Desso BV Taxandriaweg 15 5142 PA Waalwijk, The Netherlands

#### Declared product / Declared unit

1m<sup>2</sup> tufted carpet tiles with a surface pile of 800-900g/m<sup>2</sup> recycled polyamide 6 and a modified bitumen backing.

#### Scope:

The declaration applies for a group of tufted modular carpet tiles.

It is only valid in conjunction with a valid PRODIS licence.

The products are produced in the manufacturing site Dendermonde, Belgium (tufting) and in Waalwijk, The Netherlands (precoating and heavy coating).

The owner of the declaration shall be liable for the underlying information and evidence.

#### Verification

The CEN Norm EN 15804 serves as the core PCR Independent verification of the declaration and data according to ISO 14025

internally x externally

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Dr. Eva Schmincke (Independent tester appointed by SVA)

#### **Technical Data**

#### **Constructional data**

Name	Value	Unit
Product Form	Tiles	-
Type of manufacture	Tufted	-
Yarn type	100% recycled PA 6	-
Secondary backing	Heavy backing bitumen based with textile bottom	_
becondary backing	and reinforcement	
Total pile weight	800-900	g/m²
Total carpet weight	4400	g/m <sup>2</sup>

Additional product properties according to EN 1307 can be found on the "Product Information System (PRODIS)" using the PRODIS registration number of the product.

www.pro-dis.info



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

Name	Value	Unit
Polyamide 6	20,6	%
Polyester	1,2	%
Polypropylene	1,0	%
Limestone	56,3	%
Bitumen	13,0	%
Aluminium hydroxide	1,2	%
Latex	5,4	%
Glass fibre	0,7	%
Additives	0,6	%

# LCA: Calculation rules

#### **Declared Unit**

#### Declared unit

Boolaroa ante		
Name	Value	Unit
Declared unit	1	m <sup>2</sup>
Conversion factor to 1 kg (average product)	0.23	-
Mass reference (average product)	4,4	kg/m²

#### System boundary

#### Type of the EPD: Cradle to grave.

#### System boundaries of the modules A, B, C, D:

#### A1-A3 Production:

Energy supply and production of the basic material, processing of secondary material, auxiliary material, transport of the material to the manufacturing site, emissions, waste water treatment, packaging material and waste processing up to the landfill of residual waste (except radioactive waste). Credits for electricity and steam from the incineration of production waste are aggregated.

#### A4 Transport:

Transport of the packed textile floorcovering from manufacturing gate to the place of installation.

#### A5 Installation:

Installation of the textile floorcovering, production and transport of auxiliary material, waste processing up to the landfill of residual waste (except radioactive waste), the production of the amount of carpet that occurs as installation waste incl. its transport to the place of installation.

Credits for electricity and steam from the incineration of installation waste leave the product system.

#### B1 Use:

Indoor emissions during the use stage. Due to known VOC-decay curves of the product after the first year no product related VOC-emissions are relevant.

#### **B2** Maintenance:

Cleaning of the textile floorcovering for a period of 1 year:

- Vacuum cleaning – electricity supply

#### Reference service life

The service life of textile floorcoverings strongly depends on the correct installation taking into account the declared use classification and the adherence of cleaning and maintenance instructions. A minimum service life of 10 years could be assumed, technical service life can be considerably longer.

# - Wet cleaning – electricity, water consumption, production of the cleaning agent, waste water treatment.

The declared values in this module have to be multiplied with the assumed service time of the floor covering in the building considered.

#### <u>B3 - B7:</u>

The modules are not relevant and therefore not declared.

#### C1 De-construction:

De-construction of the floorcovering is made by handcraft and causes no additional impacts.

#### C2 Transport:

Transport of the carpet waste to landfill, to the municipal waste incineration (MWI) or to the waste collection for recycling.

#### C3 Waste processing:

C3-0, C3-1: Landfill and waste incineration need no waste processing.

C3-2: Collection of the carpet waste, waste processing (granulating).

#### C4 Disposal

C4-0, C4-1: Impacts from landfill or from waste incineration (credits leave the system boundaries), C4-2: The processed carpet waste leaves the system and need no disposal.

#### D Recycling potential:

D-0, D-1: Energy credits from landfill and from waste incineration (processing with < 60% efficiency), D-2: Transport from the reprocessing plant to the cement plant, substitution of material and fuel input in the cement kiln (substantial and energetic credits).

#### 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.



## LCA: Scenarios and additional technical information

The following information refer to the declared modules and are the basis for calculations or can be used for further calculations. All indicated values refer to the declared functional unit.

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

Name	Value	Unit
Litres of fuel (truck, EURO 0-5 mix)	29.4	l/100km
Transport distance	700	km
Capacity utilisation (including empty runs)	85	%
Gross density of products transported	630	kg/m³

#### Installation in the building (A5)

Name	Value	Unit
Auxiliary (Fixing agent)	0.2	kg
Material loss	0.13	kg

Cardboard waste (packaging material) leaves the system for recycling. Installation waste is considered to be incinerated in a municipal waste incineration plant.

#### Maintenance (B2)

Indication per m<sup>2</sup> and year

Name	Value	Unit
Maintenance cycle (wet cleaning)	1,5	1/year
Maintenance cycle (vacuum cleaning)	208	1/year
Water consumption (wet cleaning)	0.003	m <sup>3</sup>
Cleaning agent (wet cleaning)	0,06	kg
Electricity consumption	0.314	kWh

Further information on cleaning and maintenance see www.desso.com

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

Three different end-of-life scenarios are declared and the results are indicated separately in module C. Each scenario is calculated as a 100% scenario.

Scenario 0: 100% landfill

Scenario 1: 100% municipal waste incineration (MWI) Scenario 2: 100% recycling in the cement industry

If combinations of these scenarios have to be calculated this should be done according to the following scheme:

EOL-impact = x% impact (Scenario 0) + y% impact (Scenario 1) + z% impact (Scenario 2)

Name	Value	Unit
Collected as mixed construction waste	4.4	kg
(scenario 0 and 1)	т.т	ку
Collected separately (scenario 2)	4.4	kg
Landfilling (scenario 0)	4.4	kg
Energy recovery (scenario 1)	4.4	kg
Energy recovery (scenario 2)	1,8	kg
Recycling (scenario 2)	2.6	kg

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

The recovery or recycling potentials due to the three end-of-life scenarios (module C) are indicated separately.

<u>Recycling in the cement industry (scenario 2)</u> The organic material of the carpet is used as secondary fuel in a cement kiln. It substitutes mainly lignite (62,7%), hard coal (27,3%) and petrol coke (10,0%).

The inorganic material is substantially integrated in the cement clinker and substitutes original material input.



# LCA: Results

## Information on not declared modules:

The modules B3 - B7 are not relevant during the service time of the carpet and are therefore not declared. Module C1 causes no additional impact (see "LCA: Calculation rules", "C1 De-construction") and is therefore not declared.

Module C2 represents the transport for scenario 0, 1 and 2.

DESC	RIPT	ΓΙΟΝ Ο	OF THE	SYS	TEM B	OUND	ARY	(X = IN	CLUD	ED IN	LCA; I	MND =	MOD	ULE N	OT DE	ECLAR	ED)
PROE	DUCT S	STAGE	ON PR	TRUCTI OCESS AGE		USE STAGE USE STAGE END OF LIFE STAGE BEYOND T SYSTEM BOUNDAR			END OF LIFE STAGE				ADS ID THE TEM				
Raw material supply	Transport	Manufacturing	Transport	Construction- installation process	Use	Maintenance	Repair	Replacement <sup>1)</sup>	Refurbishment <sup>1)</sup>	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	C	<b>b</b>
Х	Х	X	X	Х	X	X	MND	MND	MND	MND	MND	MND	Х	Х	Х	>	<
RESL	JLTS	OF TH	IE LCA	4 - EN	VIRON	IMENT	AL IN	IPACT	: 1 m²	floorc	overin	ig			-		
Param eter	U	Jnit	A1-A3	A4	A5	B1	B2	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2
GWP	[kg C	O <sub>2</sub> -Eq.]	8.82	0.19	0.56	0.00	0.29	0.01	0.00	0.00	0.03	9.83	8.30	0.00	-0.25	-2.56	-0.41
ODP	[kg CF	C11-Eq.]	1.19E-7	3.30E- 12	1.94E-8	0.00E+0	6.45E-9	1.80E-	0.00E+0	0.00E+0	2.60E- 11	1.20E- 10	7.20E- 10	0.00E+0	-2.20E- 10	-5.30E- 10	-1.03E-7
AP		0 <sub>2</sub> -Eq.]		8.42E-4				3 4.68E-5		0 0.00E+0	1.39E-4	1.21E-3	5.47E-3		-1.18E-3	-4.18E-3	
EP POCP		O₄) <sup>3</sup> - Eq.] hen Eq.]								0 0.00E+0 0 0.00E+0							
ADPE		Sb Eq.]	4.58E-4		6.38E-6			- 3.80E-		0.00E+0							
ADPF		MJ]	166.00	2.56	7.64	0.00	6.55	0.14	0.00	0.00	0.52	3.37	7.13	0.00	-4.37	-42.50	-68.10
Captio	n Eut	trophicati	on potent	tial; POC	P = Form fos	nation po ssil resou	tential of irces; Al	f troposph	ieric ozo iotic depl	pheric oz ne photoc letion pote ring	hemical	oxidants;	; ADPE =				
Param	eter	Unit	A1-A3	A4	A5	B1	B2	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2
PER	F	[MJ]	10.90	0.10	1.77	0.00	0.50	0.01	0.00			0.40					
		FN 4 13	0.00							0.00	0.09	0.16	0.32	0.00	-0.73	-1.71	-0.18
PERI PER	М	[MJ] [MJ]	0.00 10.90	0.00	0.00	0.00	0.00 0.50	0.00	0.00	0.00 0.00 0.00	0.09 0.00 0.09	0.16 0.00 0.16	0.32 0.00 0.32	0.00 0.00 0.00	-0.73 0.00 -0.73	-1.71 0.00 -1.71	-0.18 0.00 -0.18
PER PENF	M T RE	[MJ] ^	10.90 104.85	0.10 2.56	1.77 7.65	0.00 0.00	0.50 6.55	0.01 0.14	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.09 0.52	0.00 0.16 3.37	0.00 0.32 7.13	0.00 0.00 0.00	0.00 -0.73 -4.38	0.00 -1.71 -42.60	0.00 -0.18 -68.10
PER PENF PENF	M T RE RM	[MJ] [MJ] ^ [MJ]	10.90 104.85 62.15	0.10 2.56 0.00	1.77 7.65 0.00	0.00 0.00 0.00	0.50 6.55 0.00	0.01 0.14 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.09 0.52 0.00	0.00 0.16 3.37 0.00	0.00 0.32 7.13 0.00	0.00 0.00 0.00 0.00	0.00 -0.73 -4.38 0.00	0.00 -1.71 -42.60 0.00	0.00 -0.18 -68.10 0.00
PER PENF	M T RE RM RT	[MJ] [MJ] ^ [MJ]	10.90 104.85	0.10 2.56	1.77 7.65	0.00 0.00	0.50 6.55	0.01 0.14	0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.09 0.52 0.00 0.52 0.00	0.00 0.16 3.37 0.00 3.37 0.00	0.00 0.32 7.13 0.00 7.13 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 -0.73 -4.38 0.00 -4.38 0.00	0.00 -1.71 -42.60 0.00 -42.60 0.00	0.00 -0.18 -68.10 0.00 -68.10 0.00
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PER PENF PENF SM RSF NRS FW Captio	M T RE RM RT F rene of se	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] 2 [MJ] 2 [MJ] 2 [m <sup>3</sup> ] 2 PERE = ewable p non rene ewable p econdar	10.90 104.85 62.15 167.00 0.88 2.33E-3 2.44E-2 1 2.44E-2 1 2.44E-2 1 9 Use of re- rimary er wable p vrimary e y materia	0.10 2.56 0.00 2.56 0.00 62E-5 69E-4 9.98E-3 2 enewabl hergy re rimary e nergy re al; RSF	1.77 7.65 0.00 7.65 0.01 1.08E-4 C 1.13E-3 C 1.05E+0 C e primar sources energy ex sources = Use of	0.00 0.00 0.00 0.00 0.00 0.00E+0 2.00E+0	0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 7 exclud raw ma non ren raw ma ble seco	0.01 0.14 0.00 0.14 0.00 8.98E-7 9.41E-6 5.55E-4 ing renew terials; P ewable p aterials; C	0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 vable pr ERT = 1 PERT = 2 PENRT = PENRT = PENRT =	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 imary enc Total use energy re Total use SF = Use	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy resc of renew sources sources so f non re-	0.00 0.16 3.37 0.00 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 burces u vable pri used as n renewable	0.00 0.32 7.13 0.00 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en raw ma able prim	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 aw mate ergy ress terials; P pary ener	0.00 -0.73 -4.38 0.00 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE purces; J ENRM = gy resou	0.00 -1.71 42.60 0.00 42.60 0.00 -4.93E-4 -5.17E-3 -2.22E+0 RM = Us PENRE = = Use of urces; SM	0.00 -0.18 -68.10 0.00 -68.10 0.00 -2.33E-5 -2.41E-4 -3.25E-1 se of = Use of non $\Lambda$ = Use
PER PENF PENF SM RSF NRS FW Captio	M T RE RM RT F F F F F F F F F F Of se	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] 2 [MJ] 2 [MJ] 2 [MJ] 2 [m <sup>3</sup> ] 2 [m <sup>3</sup>	10.90 104.85 62.15 167.00 0.88 2.33E-3 2.44E-2 1 2.44E-2 1 2.44E-2 1 9 Use of re- rimary er swable p vrimary e y materia	0.10 2.56 0.00 2.56 0.00 62E-5 69E-4 9.98E-3 2 enewabl hergy re rimary e nergy re al; RSF	1.77 7.65 0.00 7.65 0.01 1.08E-4 C 1.13E-3 C 1.05E+0 C e primar sources energy ex sources = Use of	0.00 0.00 0.00 0.00 0.00 0.00E+0 2.00E+0	0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 7 exclud raw ma non ren raw ma ble seco	0.01 0.14 0.00 0.14 0.00 8.98E-7 9.41E-6 5.55E-4 ing renew terials; P ewable p aterials; C	0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 vable pr ERT = 1 PERT = 2 PENRT = PENRT = PENRT =	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 imary enc Total use energy re = Total use SF = Use en	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy resc of renew sources sources so f non re-	0.00 0.16 3.37 0.00 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 burces u vable pri used as n renewable	0.00 0.32 7.13 0.00 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en raw ma able prim	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 aw mate ergy ress terials; P pary ener	0.00 -0.73 -4.38 0.00 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE purces; J ENRM = gy resou	0.00 -1.71 42.60 0.00 42.60 0.00 -4.93E-4 -5.17E-3 -2.22E+0 RM = Us PENRE = = Use of urces; SM	0.00 -0.18 -68.10 0.00 -68.10 0.00 -2.33E-5 -2.41E-4 -3.25E-1 se of = Use of non $\Lambda$ = Use
PER PENF PENF SM RSF NRS FW Captio	M T RE RM RT F F rene of se JLTS floor(	[MJ]       [M]       2       [m <sup>3</sup> ]       2       PERE =       wable p       non rene       ewable p       non rene       ewable p       coverin       OF TH       Coverin       Unit       [kg]	10.90 104.85 62.15 167.00 0.88 1.33E-3 1 2.33E-3 1 2.44E-2 1 2.44E-2 1 2.44E-2 1 2.21E+1 9 Use of re rimary er swable p yrimary er swable p	0.10 2.56 0.00 2.56 0.00 6.2E-5 6.9E-4 1.98E-3 renewable nergy reality realit	1.77 7.65 0.00 7.65 0.01 1.08E-4 (0 1.13E-3 (0 1.05E+0 (0 e primary sources energy ex- esources = Use of JTPUT A5 0.02	0.00 0.00 0.00 0.00 0.00 0.00E+0 2.00E+0 2.00E+0 9 energy used as renewat FLOV B1 0.00	0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 r exclud raw ma non ren raw ma pole secco VS AN B2 0.00	0.01 0.14 0.00 0.14 0.00 0.14 0.00 8.98E-7 9.41E-6 5.55E-4 ing renew terials; P ewable p aterials; F indary fue D WA C2 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 vable pr ERT = 1 primary of PENRT = pls; NRS wate STE C C3 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy resc of renew sources se of nor of non r ORIES C3/2 0.00	0.00 0.16 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 ources u vable pri used as n renewa enewabl : C4 0.00	0.00 0.32 7.13 0.00 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en raw ma ble prim e second C4/1 0.59	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy ress terials; P ary ener dary fuel C4/2 0.00	0.00 -0.73 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE pources; FW = gy resou s; FW = <b>D</b> 0.00	0.00 -1.71 -42.60 0.00 -42.60 0.00 -4.93E-4 -5.17E-3 -2.22E+0 RM = Us PENRE = PENRE = Use of n Use of n Use of n	0.00 -0.18 -68.10 0.00 -2.33E-5 -2.41E-4 -3.25E-1 ise of = Use of non A = Use et fresh D/2 0.00
PER PENF PENF SM RSF NRS FW Captio	M T RE RM RT F rene of se JLTS floore eter	[MJ]       [M]	10.90 104.85 62.15 167.00 0.88 2.33E-3 12.44E-2 12.21E+1 9 Use of re- rimary ere- swable por y materia 1E LCA ng A1-A3 0.01 .00E+0 9	0.10 2.56 0.00 2.56 0.00 62E-5 .69E-4 9.88E-3 1 .69E-4 .98E-3 .69E-4 .98E-3 .69E-4 .98E-3 .69E-4 .69E-	1.77 7.65 0.00 7.65 0.01 1.08E-4 (1) 1.05E+0 (2) e primary sources mergy ey sources = Use of JTPUT A5 0.02 3.21E-1 (2)	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 y energy used as renewate FLOV B1 0.00 0.00E+0 0.00 0.00E+0 0.00 0.00E+	0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 3.49E-1 rexclud raw ma non rem raw ma ole seco VS AN B2 0.00 3.20E-1	0.01 0.14 0.00 0.14 0.00 8.98E-7 9.41E-6 5.55E-4 ing renew terials; P evable p aterials; P ndary fue D WA: C2 0.00 5.06E-4	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 vable pr ERT = 7 rimary 6 PERT = 7 vable pr ERT = 7 Vab	0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 Fotal use arr ATEG C3/1 0.00 0.	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy ress of renew sources se of nor of non re ORIES C3/2 0.00 1.07E-1	0.00 0.16 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 ources u wable pri used as n renewa enewabl : C4 0.00 3.35E+0	0.00 0.32 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en raw ma ble prim e second <b>C4/1</b> 0.59 8.05E-1	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy rest terials; P ary ener dary fuel C4/2 0.00 0.00E+0	0.00 -0.73 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE burces; I Burces; I Burces; FW = 0.00 -9.90E-1	0.00 -1.71 -42.60 0.00 -42.60 0.00 -4.93E-4 -5.17E-3 -2.22E+0 RM = Us PENRE = Use of n Use of n Use of n Use of n Use 3 Use 3	0.00 -0.18 -68.10 0.00 -2.33E-5 -2.41E-4 -3.25E-1 se of non A = Use et fresh D/2 0.00 -5.32E+1
PER PENF PENF SM RSF NRS FW Captio	M T RE RM RT F rene of se JLTS floor Eter D	[MJ]       [M]	10.90 104.85 62.15 167.00 0.88 .33E-3 12.44E-2 12.1E+1 9 Use of re rimary er eywable p rimary er eywable p rimary er eywable p rimary er eywable p 1E LC/ 16 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.05 3.3 0.01 0.05 0.01 0.05 0.01 0.05 0.01 0.05 0.0	0.10 2.56 0.00 2.56 0.00 6.2E-5 6.9E-4 9.98E-3 1 enewable nergy refinance nergy	1.77 7.65 0.00 7.65 0.01 1.08E-4 (1) 1.08E-4 (1) 1.05E+0 (1) e primary sources = Use of JTPUT A5 0.02 3.21E-1 (1) 1.34E-4 (2)	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 v energy used as renewate FLOV B1 0.00 0.00E+0 0.00 0.00 0.00E+0 0.00 0.00E+0	0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 r exclud raw ma non ren raw ma ble seco VS AN B2 0.00 6.20E-1 3.95E-4	0.01 0.14 0.00 0.14 0.00 0.00 8.98E-7 9.41E-6 5.55E-4 ing renew terials; P ewable p aterials; P exact p aterials; P aterials	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 vable pr ERT = 7 vable pr ERT = 7 Vabl	0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.0	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy resc of renew sources se of nor of non re- <b>DRIES</b> <b>C3/2</b> 0.00 1.17E-1 7.63E-5	0.00 0.16 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 DURCES U wable pri used as n renewable n renewable C4 0.00 3.35E+0 6.17E-5	0.00 0.32 7.13 0.00 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en craw ma bele prim e second <b>C4/1</b> 0.59 8.05E-1 2.14E-4	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy rest terials; P ary ener dary fuel C4/2 0.00 0.00E+0	0.00 -0.73 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE burces; By resources; FW = D 0.00 -9.90E-1 -6.44E-4	0.00 -1.71 -42.60 0.00 -42.60 0.00 -4.93E-4 -5.17E-3 -2.22E+0 RM = Use PENRE = Use of n ucces; SN Use of n <b>D/1</b> 0.00 -2.33E+0 -1.50E-3	0.00 -0.18 -68.10 0.00 -2.33E-5 -2.41E-4 -3.25E-1 ise of se of = Use of non A = Use et fresh D/2 0.00 -5.32E+1 -1.11E-4
PER PENF PENF SM RSF NRS FW Captio	M T RE RM RT F rene of se JLTS floor( eter D J	[MJ]       [M]	10.90 104.85 62.15 167.00 0.88 2.33E-3 12.44E-2 12.21E+1 9 Use of re- rimary ere- swable por y materia 1E LCA ng A1-A3 0.01 .00E+0 9	0.10 2.56 0.00 2.56 0.00 62E-5 .69E-4 9.88E-3 1 .98E-3 .98E-3 .98E-3 .98E-3 .98E-3 .98E-3 .98E-3 .98E-3 .00 .00 .00 .00 .00 .00 .00 .0	1.77 7.65 0.00 7.65 0.01 1.08E-4 (1) 1.05E+0 (2) e primary sources mergy ey sources = Use of JTPUT A5 0.02 3.21E-1 (2)	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 y energy used as renewate FLOV B1 0.00 0.00E+0 0.00 0.00E+0 0.00 0.00E+	0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 3.49E-1 rexclud raw ma non rem raw ma ole seco VS AN B2 0.00 3.20E-1	0.01 0.14 0.00 0.14 0.00 8.98E-7 9.41E-6 5.55E-4 ing renew terials; P evable p aterials; P ndary fue D WA: C2 0.00 5.06E-4	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 vable pr ERT = 7 rimary 6 PERT = 7 vable pr ERT = 7 Vab	0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 Fotal use arr ATEG C3/1 0.00 0.	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy ress of renew sources se of nor of non re ORIES C3/2 0.00 1.07E-1	0.00 0.16 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 ources u wable pri used as n renewa enewabl : C4 0.00 3.35E+0	0.00 0.32 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en raw ma ble prim e second <b>C4/1</b> 0.59 8.05E-1	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy rest terials; P ary ener dary fuel C4/2 0.00 0.00E+0	0.00 -0.73 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE burces; I Burces; I Burces; FW = 0.00 -9.90E-1	0.00 -1.71 -42.60 0.00 -42.60 0.00 -4.93E-4 -5.17E-3 -2.22E+0 RM = Us PENRE = Use of n Use of n Use of n Use of n Use 3 Use 3	0.00 -0.18 -68.10 0.00 -2.33E-5 -2.41E-4 -3.25E-1 se of non A = Use et fresh D/2 0.00 -5.32E+1
PER PENF PENF SM RSF NRS FW Captio RESU 1 m <sup>2</sup> 1 Paramo HWI NHW RWI CRU MFF MEF	M T RE RM RT F F rene of se JLTS floor( eter D J J R R	[MJ]       [MJ]       [MJ]       [MJ]       [MJ]       [MJ]       [MJ]       [M]       2       [MJ]       2       [MJ]       2       [MJ]       2       [MJ]       2       [M]       2       2       [M]       2       2       2       2       2       2       3       3       3       4       4       4       4       4       4       4       4       4       4       4       4       4       4    <	10.90           104.85           62.15           167.00           0.88           3.33E-3           2.44E-2           1           2.44E-2           1           2.44E-2           9           Use of recrimary ereswable primary ereswable p	0.10 2.56 0.00 2.56 0.00 6.2E-5 6.9E-4 9.98E-3 1 enewable energy re al; RSF A - OL A4 0.00 1.0E-3 3.55E-6 0.00 0.0	1.77 7.65 0.00 7.65 0.01 1.08E-4 (0 1.13E-3 (0 1.05E+0 (0 e primary ex- sources e use of JTPUT JTPUT A5 0.02 1.34E-4 (0 0.00 0.12 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 B1 0.00 0.00E+0 0.00D+0 0.00E+0 0.00D+0	0.50 6.55 0.00 6.55 0.00 0.03E-4 2.13E-3 8.49E-1 rexclud raw ma ole seco VS AN B2 0.00 0.20E-1 3.95E-4 0.00 0.00 0.00 0.00 0.00 0.00	0.01 0.14 0.00 0.14 0.00 0.14 0.00 9.41E-6 5.55E-4 ing renew terials; P ewable p aterials; F modary fue <b>D</b> WAS <b>C2</b> 0.00 5.06E-4 1.98E-7 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.0	0.00 0.00 0.00 0.00 0.00 0.00E+0	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy resc of renew sources se of non r ORIES C3/2 0.00 1.17E-1 7.63E-5 0.00 0.00 0.00 0.00	0.00 0.16 3.37 0.00 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 burces u vable pri used as n renewable renewable c4 0.00 3.35E+0 6.17E-5 0.00 0.00 0.00 0.00	0.00 0.32 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en raw ma able prim e second C4/1 0.59 8.05E-1 2.14E-4 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 aw mate ergy ress terials; P ary enerdary fuel C4/2 0.00E+0 0.00E+	0.00 -0.73 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE purces; i ENRM = gy resou s; FW = <b>D</b> 0.00 -9.90E-1 -6.44E-4 0.00 0.00 0.00	0.00 -1.71 -42.60 0.00 -42.60 0.00 -4.93E4 -5.17E-3 -2.22E+0 RM = Use PENRE = Use of n Use of n Use of n 0.00 -2.33E+0 -1.50E-3 0.00 0.00 0.00 0.00 0.00	$\begin{array}{c} 0.00 \\ -0.18 \\ -68.10 \\ 0.00 \\ -2.33E-5 \\ -2.41E-4 \\ -3.25E-1 \\ \hline se of \\ = Use of \\ non \\ A = Use of \\ et fresh \\ \hline \\ $
PER PENF PENF SMR RSF NRS FW Captio RESU 1 m <sup>2</sup> 1 Parama HWW RWW CRU	M T RE R R T F F rene of se JLTS floor eter D J L T S C C C C C C C C C C C C C C C C C C	[MJ]       [M]       2       [MJ]       2       [MJ]       2       [MJ]       2       [MJ]       2       [M]       2       2       [M]       2       2       2       2       2       2       2       2       2       2       2       2       3       3       3       3       3       3       3       4       4       4       4       4       4       4       4       4	10.90           104.85           62.15           167.00           0.88           3.33E-3           2.44E-2           1.24E+1           9           Use of refinancy erewable p           rimary erewable p           rimary erewable p           rimary erewable p           0.15           1E           LCA           10.00           0.00           0.00           0.00           0.00	0.10 2.56 0.00 2.56 0.00 6.2E-5 6.9E-4 9.98E-3 2.56 0.00 1.08E-3	1.77 7.65 0.00 7.65 0.01 1.08E-4 (0 1.05E+0 (0 e primary ex- sources e use of JTPUT A5 0.02 3.21E-1 (0 1.34E-4 (0 0.00 0.12	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 FLOW B1 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00 0.00E+0 0.00	0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 r exclud raw ma non ren raw ma ole seco VS AN B2 0.00 3.20E-1 3.95E-4 0.00 0.00 0.00	0.01 0.14 0.00 0.14 0.00 0.14 0.00 9.41E-6 5.55E-4 ing renew terials; P ewable p aterials; F ndary fur ID WA3 C2 0.00 5.06E-4 1.98E-7 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 vable pr ERT = bels; NRS wate STE C C3 0.00 0.00E+0 0.00E+0 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00	0.00 0.09 0.52 0.00 0.52 0.00 1.06E-5 1.11E-4 1.12E-1 ergy reso of renew sources se of nor of nor <b>DRIES</b> <b>C3/2</b> 0.00 1.17E-1 7.63E-5 0.00 0.00 0.00	0.00 0.16 3.37 0.00 2.69E-3 6.42E-3 1.25E-1 burces u vable pri used as n renewable c4 0.00 3.35E+0 6.17E-5 0.00 0.00 0.00	0.00 0.32 7.13 0.00 1.95E-4 2.02E-3 3.39E-1 sed as r mary en raw ma able prim be second C4/1 0.59 8.05E-1 2.14E-4 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy res- terials; P ary ener- dary fuel- <b>C4/2</b> 0.00 0.00E+0 0.00E+0 0.00E+0 0.00 2.58	0.00 -0.73 -4.38 0.00 -8.94E-5 -9.36E-4 -9.48E-1 rials; PE burces; ENRM = gy resou s; FW = <b>D</b> 0.00 -9.90E-1 -6.44E-4 0.00 0.00	0.00 -1.71 -42.60 0.00 -42.60 0.00 -4.93E4 -5.17E-3 -2.22E+0 RM = Us PENRE = e Use of n Use of n Use of n Use of n 0.00 -2.33E+0 -1.50E-3 0.00 0.00	0.00 -0.18 -68.10 0.00 -2.33E-5 -2.41E-4 -3.25E-1 se of = Use of non A = Use et fresh D/2 0.00 -5.32E+1 -1.11E-4 0.00 0.00

The declared values in module B2 have to be multiplied with the assumed service time (in years) of the floor covering in the building considered.



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