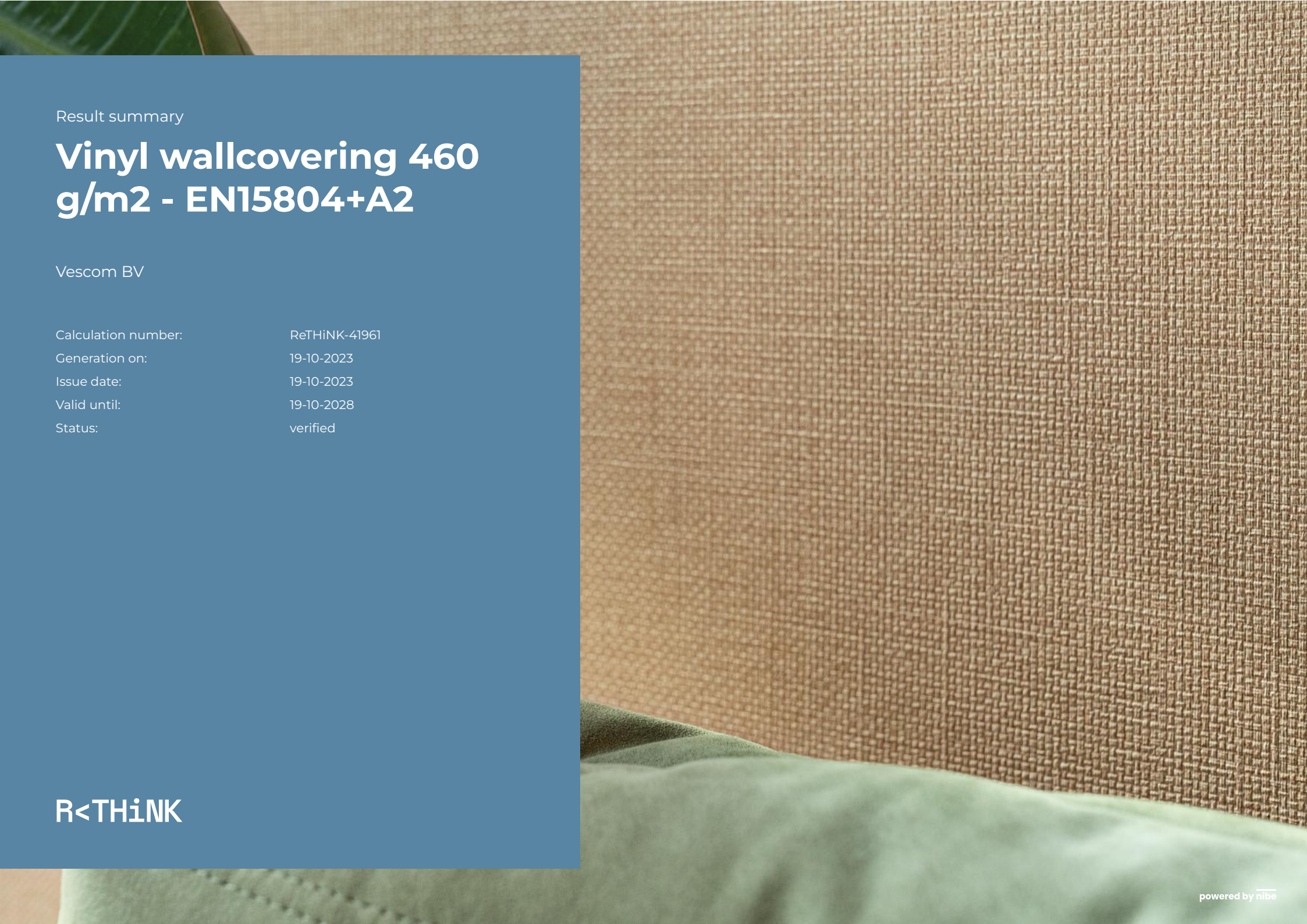
Result summary

Vinyl wallcovering 460 g/m2 - EN15804+A2

Vescom BV

Calculation number:	ReTHiNK-41961
Generation on:	19-10-2023
Issue date:	19-10-2023
Valid until:	19-10-2028
Status:	verified

R<THiNK



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1 General information

1.1 PRODUCT

Vinyl wallcovering 460 g/m2 - EN15804+A2

1.2 VALIDITY

Issue date: 19-10-2023
Valid until: 19-10-2028

1.3 OWNER OF THE DECLARATION

Manufacturer: Vescom BV
Address: Sint Jozefstraat 20, 5753 AV Deurne
E-mail: sales@vescom.com
Website: www.vescom.com
Production location: Vescom BV

Address production location: Sint Jozefstraat 20, 5753 AV Deurne

1.4 VERIFICATION OF THE DECLARATION

The independent verification is in accordance with the ISO 14025:2011. The LCA is in compliance with ISO 14040:2006 and ISO 14044:2006. The EN 15804:2012+A2:2019 serves as the core PCR.

☐ Internal ☑ External

Anne Kees Jeeninga, Advieslab

1.5 PRODUCT CATEGORY RULES

EN15804+A2:2019

1.6 FUNCTIONAL UNIT

m2 Wallcovering

Production (A1-A3) up to- and including end of life phase (C1-D) of one square meter of vinyl wallcovering. Including delivery (A4), mounting on the wall (A5), and maintenance during the product life cycle of 25 years (B1-B7). Emissions during the construction phase are not included.

Reference unit: square meter (m2)

1.7 CONVERSION FACTORS

Description	Value	Unit
Reference unit	1	m2
Weight per reference unit	0.504	kg

1 General information

Description	Value	Unit
Conversion factor to 1 kg	1.985049	m2

1.8 SCOPE OF DECLARATION AND SYSTEM BOUNDARIES

This is a Cradle to gate with options, modules C1-C4 and module D LCA. The life cycle stages included are as shown below:

(X = module included, ND = module not declared)

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	ND	ND	ND	ND	X	X	X	X	X

The modules of the EN15804 contain the following:

Module A1 = Raw material supply	Module B5 = Refurbishment
Module A2 = Transport	Module B6 = Operational energy use
Module A3 = Manufacturing	Module B7 = Operational water use
Module A4 = Transport	Module C1 = De-construction / Demolition
Module A5 = Construction - Installation process	Module C2 = Transport
Module B1 = Use	Module C3 = Waste Processing
Module B2 = Maintenance	Module C4 = Disposal
Module B3 = Repair	Module D = Benefits and loads beyond the product system boundaries
Module B4 = Replacement	

1.9 COMPARABILITY

In principle, a comparison or assessment of the environmental impacts of different products is only possible if they have been prepared in accordance with EN 15804. For the evaluation of the comparability, the following aspects have to be considered in particular: PCR used, functional or declared unit, geographical reference, the definition of the system boundary, declared modules, data selection (primary or secondary data, background database, data quality), scenarios used for use and disposal phases, and the life cycle inventory (data collection, calculation methods, allocations, validity period). PCRs and general program instructions of different EPDs programs may differ. Comparability needs to be evaluated. For further guidance, see EN 15804+A2 (5.3 Comparability of EPD for construction products) and ISO 14025 (6.7.2 Requirements for comparability).

2 Product

2.1 PRODUCT DESCRIPTION

Vescom vinyl wallcovering consists of a vinyl topcoat, printed with water based inks on a cotton backing. It is mainly used as a decorative wallcovering, mounted on interior walls with the use of Vescom adhesive.

The main component of Vescom vinyl wallcovering 350 g/m2 is PVC. This PVC film is laminated to a cotton substrate. The wallcovering is mounted on a wall with Vescom adhesive.

Weight / m2 = 350 gr

Performance demands (Certificates, quality marks, norms, etc.)

- CE Marking
- French A+ emission class

It's expected that there are no significant environmental impacts during the use-stage and during the removal (lifecycle phase C1) of the wallcovering when it's done manually. Therefore it's estimated that the environmental impacts during these lifecycle phases are less than the cut-off criteria (<1%), so they are excluded from the calculation.

EPD of interior design products may not be comparable if they do not comply with the INSIDEINSIDE horizontal PCR.

A flow diagram of the whole lifecycle is part of this EPD as a separate attachment.

LCA-performer: Pien van den Heuvel (SO), Michel Lemmen (Vescom)
Contact Vescom BV: Hanna Kohnen

2.2 DESCRIPTION PRODUCTION PROCESS

The water based inks are applied on the printing machines. After that, the cotton backing is laminated and the pattern is embossed on the calender machines. Last step is inspecting and packing on the inspection tables.

Energy consumption is monitored on a monthly basis. No allocation takes place. Waste during the production process is based on actual quantities and monitored on a weekly base as percentage of the total output. This is included in the LCA calculation.

2.3 CONSTRUCTION DESCRIPTION

The wallcovering should be applied in sequence from one production lot. First make a strip placement plan. Where several rolls are to be applied, start with the highest roll number. Cut the strips at wall height + 4cm; this is to allow for trimming at ceiling and skirting level. Number the strips. Only use black graphite pencil for this purpose. Follow the directional hanging instructions and other instructions supplied in the roll. Place the plumb line (black graphite pencil) in such a manner that the material overlaps the corner / inside angle by 2 cm. Apply adhesive to the substrate using a short-haired synthetic roller in a width of strip + 20 cm.

3 Results

3.1 ENVIRONMENTAL IMPACT INDICATORS PER SQUARE METER

CORE ENVIRONMENTAL IMPACT INDICATORS EN15804+A2

Abbreviation	Unit	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D	Total
AP	mol H+ eqv.	9.38E-3	3.28E-4	1.67E-3	4.10E-7	1.42E-3	0.00E+0	1.56E-3	0.00E+0	0.00E+0	5.52E-5	1.75E-3	4.69E-6	-5.02E-4	1.57E-2
GWP-total	kg CO2 eqv.	1.37E+0	3.80E-2	3.08E-1	7.07E-5	6.62E-1	0.00E+0	2.35E-1	0.00E+0	0.00E+0	9.53E-3	1.01E+0	4.25E-3	-4.40E-1	3.19E+0
GWP-b	kg CO2 eqv.	-1.63E-1	2.27E-5	-2.96E-2	3.26E-8	2.50E-2	0.00E+0	-6.64E-5	0.00E+0	0.00E+0	4.39E-6	7.70E-4	5.72E-6	-4.44E-4	-1.67E-1
GWP-f	kg CO2 eqv.	1.49E+0	3.80E-2	3.31E-1	7.07E-5	6.35E-1	0.00E+0	2.35E-1	0.00E+0	0.00E+0	9.52E-3	1.00E+0	4.24E-3	-4.39E-1	3.31E+0
GWP-luluc	kg CO2 eqv.	3.72E-2	1.31E-5	1.86E-2	2.59E-8	2.86E-3	0.00E+0	9.83E-5	0.00E+0	0.00E+0	3.49E-6	4.16E-4	2.56E-7	-5.20E-5	5.91E-2
EP-m	kg N eqv.	8.56E-3	9.65E-5	1.06E-3	1.44E-7	6.08E-4	0.00E+0	2.43E-4	0.00E+0	0.00E+0	1.95E-5	3.61E-4	2.58E-6	-1.30E-4	1.08E-2
EP-fw	kg P eqv.	2.64E-4	2.75E-7	4.31E-5	7.13E-10	1.92E-5	0.00E+0	1.26E-5	0.00E+0	0.00E+0	9.60E-8	1.55E-5	9.35E-9	-2.12E-6	3.53E-4
EP-T	mol N eqv.	2.46E-2	1.07E-3	4.51E-3	1.59E-6	2.86E-3	0.00E+0	3.12E-3	0.00E+0	0.00E+0	2.14E-4	4.02E-3	1.71E-5	-1.43E-3	3.90E-2
ODP	kg CFC 11 eqv.	5.52E-7	8.82E-9	7.19E-8	1.56E-11	5.04E-8	0.00E+0	1.82E-8	0.00E+0	0.00E+0	2.10E-9	1.62E-7	1.65E-10	-7.37E-8	7.93E-7
POCP	kg NMVOC eqv.	4.62E-3	3.02E-4	8.40E-4	4.55E-7	7.45E-4	0.00E+0	6.18E-4	0.00E+0	0.00E+0	6.12E-5	1.08E-3	5.79E-6	-4.71E-4	7.80E-3
ADP-f	MJ	3.11E+1	5.81E-1	4.44E+0	1.07E-3	3.74E+0	0.00E+0	2.44E+0	0.00E+0	0.00E+0	1.44E-1	3.65E+0	1.26E-2	-7.67E+0	3.84E+1
ADP-mm	kg Sb-eqv.	3.11E-5	6.06E-7	6.12E-6	1.79E-9	3.79E-6	0.00E+0	1.74E-5	0.00E+0	0.00E+0	2.41E-7	6.38E-6	5.70E-9	-1.01E-6	6.46E-5
WDP	m3 world eqv.	8.71E+0	1.78E-3	9.59E-1	3.81E-6	5.63E-1	0.00E+0	8.93E-2	0.00E+0	0.00E+0	5.14E-4	2.65E-1	5.41E-4	-9.19E-2	1.05E+1

AP=Acidification (AP) | **GWP-total**=Global warming potential (GWP-total) | **GWP-b**=Global warming potential - Biogenic (GWP-b) | **GWP-f**=Global warming potential - Fossil (GWP-f) | **GWP-luluc**=Global warming potential - Land use and land use change (GWP-luluc) | **EP-m**=Eutrophication marine (EP-m) | **EP-fw**=Eutrophication, freshwater (EP-fw) | **EP-T**=Eutrophication, terrestrial (EP-T) | **ODP**=Ozone depletion (ODP) | **POCP**=Photochemical ozone formation - human health (POCP) | **ADP-f**=Resource use, fossils (ADP-f) | **ADP-mm**=Resource use, minerals and metals (ADP-mm) | **WDP**=Water use (WDP)

3 Results

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS EN15084+A2

Abbreviation	Unit	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D	Total
ETP-fw	CTUe	3.95E+1	4.53E-1	1.09E+1	9.51E-4	7.75E+0	0.00E+0	1.08E+1	0.00E+0	0.00E+0	1.28E-1	6.73E+1	1.95E-1	-1.10E+0	1.36E+2
PM	disease incidence	6.21E-8	3.23E-9	1.24E-8	6.36E-12	9.69E-9	0.00E+0	1.33E-8	0.00E+0	0.00E+0	8.56E-10	1.34E-8	8.77E-11	-2.14E-9	1.13E-7
HTP-c	CTUh	1.67E-9	1.30E-11	2.99E-10	3.08E-14	7.47E-10	0.00E+0	1.92E-10	0.00E+0	0.00E+0	4.15E-12	3.55E-10	3.75E-13	-4.95E-11	3.23E-9
HTP-nc	CTUh	3.08E-8	5.02E-10	6.60E-9	1.04E-12	5.84E-9	0.00E+0	5.53E-9	0.00E+0	0.00E+0	1.40E-10	1.66E-8	3.87E-11	-1.21E-9	6.48E-8
IR	kBq U235 eqv.	8.75E-2	2.53E-3	1.29E-2	4.47E-6	9.79E-3	0.00E+0	6.07E-3	0.00E+0	0.00E+0	6.01E-4	1.57E-2	4.93E-5	-4.20E-3	1.31E-1
SQP	Pt	2.24E+1	6.03E-1	6.71E+0	9.25E-4	2.25E+0	0.00E+0	2.20E+0	0.00E+0	0.00E+0	1.24E-1	1.15E+0	2.99E-2	-1.70E+0	3.38E+1

ETP-fw=Ecotoxicity, freshwater (ETP-fw) | **PM**=Particulate Matter (PM) | **HTP-c**=Human toxicity, cancer (HTP-c) | **HTP-nc**=Human toxicity, non-cancer (HTP-nc) | **IR**=Ionising radiation, human health (IR) | **SQP**=Land use (SQP)

CLASSIFICATION OF DISCLAIMERS TO THE DECLARATION OF CORE AND ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

ILCD classification	Indicator	Disclaimer
ILCD type / level 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD type / level 2	AAcidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD type / level 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2

3 Results

ILCD classification	Indicator	Disclaimer
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2

Disclaimer 1 – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – 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 experienced with the indicator.

3.2 INDICATORS DESCRIBING RESOURCE USE AND ENVIRONMENTAL INFORMATION BASED ON LIFE CYCLE INVENTORY (LCI)

PARAMETERS DESCRIBING RESOURCE USE

Abbreviation	Unit	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D	Total
PERE	MJ	4.28E+0	6.95E-3	1.75E+0	1.33E-5	4.08E-1	0.00E+0	3.13E-1	0.00E+0	0.00E+0	1.80E-3	4.03E-1	2.17E-4	-3.34E-1	6.83E+0
PERM	MJ	0.00E+0	0.00E+0	3.12E-1	0.00E+0	1.56E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.28E-1
PERT	MJ	4.28E+0	6.95E-3	2.06E+0	1.33E-5	4.23E-1	0.00E+0	3.13E-1	0.00E+0	0.00E+0	1.80E-3	4.03E-1	2.17E-4	-3.34E-1	7.16E+0
PENRE	MJ	2.23E+1	6.17E-1	3.71E+0	1.13E-3	3.39E+0	0.00E+0	2.62E+0	0.00E+0	0.00E+0	1.52E-1	3.87E+0	1.34E-2	-8.08E+0	2.86E+1
PENRM	MJ	1.10E+1	0.00E+0	1.05E+0	0.00E+0	6.12E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.90E-1	1.23E+1
PENRT	MJ	3.33E+1	6.17E-1	4.77E+0	1.13E-3	4.01E+0	0.00E+0	2.62E+0	0.00E+0	0.00E+0	1.52E-1	3.87E+0	1.34E-2	-8.47E+0	4.08E+1
SM	Kg	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	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	MJ	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	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ	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	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	M3	2.47E-1	6.24E-5	2.80E-2	1.30E-7	1.58E-2	0.00E+0	2.64E-3	0.00E+0	0.00E+0	1.75E-5	7.17E-3	1.32E-5	-1.04E-3	2.99E-1

PERE=renewable primary energy ex. raw materials | **PERM**=renewable primary energy used as raw materials | **PERT**=renewable primary energy total | **PENRE**=non-renewable primary energy ex. raw materials | **PENRM**=non-renewable primary energy used as raw materials | **PENRT**=non-renewable primary energy total | **SM**=use of secondary material | **RSF**=use of renewable secondary fuels | **NRSF**=use of non-renewable secondary fuels | **FW**=use of net fresh water

3 Results

OTHER ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

Abbreviation	Unit	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D	Total
HWD	Kg	3.00E-5	1.31E-6	1.38E-5	2.70E-9	4.49E-6	0.00E+0	4.54E-6	0.00E+0	0.00E+0	3.64E-7	5.97E-6	1.92E-8	-9.28E-6	5.12E-5
NHWD	Kg	1.46E-1	4.53E-2	4.26E-2	6.76E-5	5.15E-2	0.00E+0	4.45E-2	0.00E+0	0.00E+0	9.11E-3	5.98E-2	5.05E-2	-6.34E-3	4.43E-1
RWD	Kg	7.68E-5	3.98E-6	1.21E-5	7.00E-9	9.70E-6	0.00E+0	6.92E-6	0.00E+0	0.00E+0	9.43E-7	1.31E-5	7.50E-8	-5.02E-6	1.19E-4

HWD=hazardous waste disposed | **NHWD**=non hazardous waste disposed | **RWD**=radioactive waste disposed

ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS

Abbreviation	Unit	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D	Total
CRU	Kg	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	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	Kg	0.00E+0	0.00E+0	1.35E-2	0.00E+0	1.77E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.52E-2	0.00E+0	0.00E+0	5.64E-2
MER	Kg	0.00E+0	0.00E+0	3.83E-5	0.00E+0	1.91E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	4.02E-5
EET	MJ	0.00E+0	0.00E+0	2.59E-1	0.00E+0	5.21E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.02E+0	3.28E+0
EEE	MJ	0.00E+0	0.00E+0	1.50E-1	0.00E+0	3.02E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.75E+0	1.90E+0

CRU=Components for re-use | **MFR**=Materials for recycling | **MER**=Materials for energy recovery | **EET**=Exported Energy Thermic | **EEE**=Exported Energy Electric

3 Results

3.3 INFORMATION ON BIOGENIC CARBON CONTENT PER SQUARE METER

BIOGENIC CARBON CONTENT

The following Information describes the biogenic carbon content in (the main parts of) the product at the factory gate per square meter:

Biogenic carbon content	Amount	Unit
Biogenic carbon content in the product	0	kg C
Biogenic carbon content in accompanying packaging	0.008909	kg C

UPTAKE OF BIOGENIC CARBON DIOXIDE

The following amount of uptake of carbon dioxide is account in module A1 by the main parts of the product. Related uptake and release of carbon dioxide in downstream processes are not taken into account in this number although they do appear in the presented results.

Uptake Biogenic Carbon dioxide	Amount	Unit
Packaging	0.03267	kg CO2 (biogenic)

4 Contact information

Publisher	Operator	Owner of declaration
Vescom BV Sint Jozefstraat 20 5753 AV Deurne, NL	**Vescom BV** Sint Jozefstraat 20 5753 AV Deurne, NL	**Vescom BV** Sint Jozefstraat 20 5753 AV Deurne, NL
E-mail: sales@vescom.com **Website:** www.vescom.com	**E-mail:** sales@vescom.com **Website:** www.vescom.com	**E-mail:** sales@vescom.com **Website:** www.vescom.com