Amtico Form Bio (Oct 2024G)

LCA project version:	1.0
License holder: Date	Amtico Ltd
report created:	06 November 2024

Product Information

Product description and use

Provide a description of the product and of how it is used once installed. If the project is for an average product state this here and list the products covered.

Description
• Amtico Form is a LVT Flooring collection, consisting of a range of Wood and Stone designs, available in a range of finishes, sizes and laying patterns. Amtico Form products have a total thickness of 2.5mm with a 0.7mm wear layer, providing a usage classification (EN ISO 10582) of 1. 23 Heavy Domestic 2. 34 Very Heavy Commercial 3. 43 Heavy Light Industrial The Form Collection comes with a 30 year wear out warranty for residential installation and 12 years for commercial use. Form is manufactured from ortho-phthalate free plasticisers, contains up to 23% recycled pre-consumer content and also includes an antimicrobial additive, for enhanced hygiene and protection from bacteria and viruses such as MRSA, E.coli and SARS-CoV-2. Form is a low VOC product, certified to Eurofins Indoor Air Comfort Gold and Finnish RTS M1.

Manufacturing process description

Provide a description of how the product is manufactured.

Description
The product is constructed by the thermal lamination of the wear layer plies, print film and backing plies. The wear layer and backing plies are all manufactured as follows, Required ply raw materials are blended The ply blend is then heated and calendered on a mill to produce a ply of the required thickness. The plies required to form the end product, along with the print film, are thermally laminated together under pressure, to form the final product. The product is then polyurethane coated, before being cut to size, boxed and dispatched to the customer. For process diagram see attached document.

Technical properties and values

List the most relevant technical properties of the product (with values, units and any relevant standard references). This is not mandatory but is required if you wish to later submit an EPD of the product for verification.

Description
Amtico Form Technical Specification can be found in the attached Technical Data Sheet document

Explanation of any 'n/a' entries

If you enter any entries as 'n/a' when completing your project, please explain here why you have not entered any values.

Description
Production stage (A1-A3): Emissions to Air: No outputs to air are measured from the manufacturing site. Emissions to Water: No outputs to water are measured from the manufacturing site. Emissions to Soil: No outputs to soil are measured from the manufacturing site. Construction & Installation stage (A4-A5): A5- Fuel/ Energy/water: Premixed adhesives are hand applied to the floor substrate and the tiles installed. Cutting of tiles is typically performed by hand with a knife. No power tools or additional water is required for installation. Emissions to Air/Water/Soil: Amtico Signature should only be installed with zero or very low emission adhesive meeting the GEV EMICODE EC1 Plus requirements. No emissions to air, water or soil expected. Use Stage – Maintenance (B2): Fuel/Energy: No energy is required to manually dry or wet mop. Emissions to Air/Water/Soil: No emission to air, water or soil are expected during wet or dry cleaning of this product. End-of-life Stage (C1-C4): C1 Deconstruction -Ancillary Materials & Water: The floor tiles are mechanically removed without the need of any ancillary materials or the addition of water. C1 Deconstruction- Emissions, Air, Water & Soil: No emissions to air, water or soil are expected from the mechanical removal of the tiles. C1 Deconstruction-; Waste, Material Waste and Water Discharged. In addition to the actual flooring material other wastes maybe created depending on the substrate or under-layments used in the initial construction. As this greatly varies from site to site this was not included in the study. No water discharge is created during the deconstruction. C3 Waste Processing:- Ancillary Materials/Fuel & Energy/Water.: No ancillary materials, fuel, energy or water are required to process the waste material after the initial deconstruction. C3 Waste Processing: - Emissions Air/Water/Soil: No emissions to air, water or soil are measured from the waste processing site. C3 Waste Processing: - Water Discharged: No water discharged during the waste processing site.

Additional information

If you have any further texts that you feel is necessary to support your project, you can add them in this section by adding new text boxes.

Title	Description
Assessment Product Catorgery Rules	BRE 2021 Product Category Rules (PN 514 Rev 3.0) for Type III environmental product declaration of construction products to EN 15804:2012 +A2:2019

Related Files

Manufacturing flow process diagram

This should be a high quality image, no bigger than 16 cm wide x 21 cm high, and should match the text description of the process provided in the 'Manufacturing process description' in the previous tab 'Product Information'.

Attachment (Inlcuded in downloaded zip folder)
QSF-TEC.0034 Flow Diagrams_Cov Products.jpg

Quantification of energy and material inputs and outputs

This should ideally be a spreadsheet explaining the allocation procedures used and that shows how values entered into LINA were derived. If multiple products are made on the manufacturing site, a spreadsheet where it can clearly be understood how the values added for your product in LINA were derived from total site, needs to be added.

Attachment (Inlcuded in downloaded zip folder)
Mass Balance 2022 v.7.xlsx

Documentation supporting the reference service life
If a functional unit has been selected for a 'cradle-to-gate with options' or 'cradle-to-grave' study (and the use stage has been declared), publicly available documentation that supports the entered reference service life must be uploaded. Alternatively, you can reference a publicly accessible document in a web-link in the 'Additional information' section of the previous tab, 'Product Information'. Please note that this evidence is not mandatory if a declared unit has been selected for a 'cradle-to-gate with options' or 'cradle-to-grave' study. However, we recommend that the RSL of your product is added to the EPD for additional transparency.

Attachment (Inlcuded in downloaded zip folder)
FOR-WR-20180326-02-GB.pdf

Additional documents	
If you have any further documents that are necessary to support your project, you can add them in this section.	
Description	**Attachment (Inlcuded in downloaded zip folder)**
Commercial Warranty	FOR-WC-20210519-04-EN.pdf
Technical Datasheet	FOR-TS-20210215-09-EN.pdf
Raw Material Supply Distances	Supply Distances 2021 v.5.xlsx
Delivery Distances	Form (Artisan & Ceramic) Delivery Distances v7.xlsx
Adhesive Delivery Distance and Coat Weights	Adhesive delivery distance and coat weight v.5.xlsx

Goal & Scope

Declaration type	Cradle to gate with options
Selected modules	A1, A2, A3, A4, A5, B2, C1, C2, C3, C4, D
Reference (or estimated) service life	30 years
Study period	60 years
Declared unit	$1m^2$
Weight per declared/functional unit	3.4500 m²

Manufacturing sites

Kingfield Road	
Name of manufacturer and address of site	The Amtico Company Ltd Kingfield Road, Coventry, CV6 5AA.
Period covered	02 January 2021 - 31 December 2021
Total production	xxx,xxx m²
Mass balance	0.00%

Product

Kingfield Road

Raw material supply (A1)

Raw material supply

Raw material supply & transport

Please list all materials and their quantities that go into the production of your product under assessment. Entered quantities should relate to the production period previously selected in the 'General' section and to the total production output of the product.

Material description	Material	Quantity	Distance by air	Distance by rail	Distance by land	Distance by sea
1,2-Cyclohexane dicarboxylic acid diisononyl ester	Terephthalic acid	xx,xxx kg	0 km	0 km	942 km	50 km
Epoxidised Soya Bean Oil (ESBO)	Soybean oil	xx,xxx kg	0 km	0 km	176 km	0 km
Stabiliser	Unspecified organic chemical	xx,xxx kg	0 km	0 km	176 km	0 km
UV Stabiliser	UV Stabiliser/Octabenzone	xxx kg	0 km	0 km	1,598 km	50 km
Acrylic Processing Aid	Acrylic binder	xx,xxx kg	0 km	0 km	649 km	21,868 km
Black Pigment Masterbatches	Carbon black	x,xxx kg	0 km	0 km	628 km	50 km
Print Film	Polyvinylchloride (PVC) extruded forms	xx,xxx kg	0 km	0 km	255 km	21,141 km
Limestone (Supplier 1)	Limestone, crushed	xx,xxx kg	0 km	0 km	198 km	0 km
Limestone (Supplier 2)	Limestone, crushed	xxx,xxx kg	0 km	0 km	140 km	0 km
Limestone (Supplier 3)	Limestone, crushed	xx,xxx kg	0 km	0 km	109 km	0 km
Limestone (Supplier 4)	Limestone, crushed	xx,xxx kg	0 km	0 km	198 km	0 km
Urethane Lacquer	Polyurethane, rigid foam	xx,xxx kg	0 km	0 km	419 km	50 km
Antimicrobial Additive	Unspecified inorganic chemical	xx kg	0 km	0 km	178 km	0 km
PVC Bio Attributed	Polyester-complexed starch biopolymer	xxx,xxx kg	0 km	0 km	572 km	50 km

Manufacturing (A3)

Inputs

Ancillary materials

For the reported production period and output, add any ancillary materials needed to support the production process of the product and their transport distances to the manufacturing site. For fuels delivered to site, add the quantity and supply distance here (select 'Other' as the material family and then 'transport of fuel') as well as in the following 'Fuel/Energy' section.

If there are no ancillary materials used, press '+Add' and write 'n/a' in the description box. You may leave the other fields empty.

Material description	Material	Quantity	Distance by air	Distance by rail	Distance by land	Distance by sea
Roll Cores	100% recycled graphic paper	xxx kg	0 km	0 km	166 km	0 km

Packaging

For the reported production period and output, add the quantity of packaging materials used to package the final product and their transport distances to the manufacturing site.

If no packaging is used, press '+Add' and write 'n/a' in the description box. You may leave the other fields empty.

Material description	Material	Quantity	Distance by air	Distance by rail	Distance by land	Distance by sea
Wooden Pallets	BRE 15804 Wood pallet	xx,xxx kg	0 km	0 km	48 km	0 km
Cardboard Cartons	Cardboard	xx,xxx kg	0 km	0 km	21 km	0 km
Carton Labels	Printed paper	xxx kg	0 km	0 km	161 km	0 km
Gripsheets (Supplier 1)	Packaging paper	xx kg	0 km	0 km	48 km	0 km
Gripsheets (Supplier 2)	Packaging paper	xx kg	0 km	0 km	173 km	0 km
Corner Edge Protectors	Cardboard	xxx kg	0 km	0 km	113 km	0 km
Stretchwrap	Packaging film, PE	xxx kg	0 km	0 km	7 km	0 km
Strapping	Polypropylene strapping / tape	xx kg	0 km	0 km	7 km	0 km
Top cover (Biopolyethylene)	Packaging film, PE	xxx kg	0 km	0 km	7 km	0 km
Packing Tape	Polypropylene strapping / tape	xxx kg	0 km	0 km	43 km	0 km

Fuel/Energy

For the reported production period and output, add the quantity of energy and fuels used at the manufacturing site. If no fuels or energy is used, press '+Add' and write 'n/a' in the description box. You may leave the other fields empty.

Description	Energy Source	Quantity
Electricity	Electricity, GB (kWh)	1,122,434 kWh
Natural Gas	Natural gas, at industrial furnace (kWh, GB)	681,733 kWh

Water

For the reported production period and output, add the quantity of water used at the manufacturing site. If no water is used, press '+Add' and write 'n/a' in the description box. You may leave the other fields empty.

Material description	Water Input	Quantity
Mains Water	Tap water (m^3)	1,071.31 m^3

Emissions

To air

Material description	Flow	Quantity
N/A		

To water

Material description	Flow	Quantity
N/A		

To soil

Material description	Flow	Quantity
N/A		

Waste

Production waste

Material description	Waste stream	Quantity
Production Waste For off-site Recycling	Polyvinylchloride (PVC) waste to recycling proxy	x,xxx kg
Production Waste For Off-site Recycling	Polyvinylchloride (PVC) waste to recycling proxy	xx,xxx kg

Other waste

Material description	Waste stream	Quantity
Paper & Cardboard	Paper/cardboard waste to recycling	x,xxx kg
Plastic Packaging Waste (LDPE/stretch wrap)	Polyethylene (PE) waste to recycling	x,xxx kg
Metal	Steel waste recycling treatment	x,xxx kg
General Mixed Waste	General waste to incineration	xx,xxx kg
Timber	Wood waste to recycling	x,xxx kg

Water discharged

Material description	Waste stream	Quantity
Water to Drain	Wastewater to sewer (m^3)	1,071.33 m^3

Construction Transport

to site (A4)

Transport to site

Scenario description
Describe the assumptions made for this scenario module that support the data you will enter, such as the assumed location of the construction/installation site and how the product is transported there.
Description
Products manufactured at Coventry are disturbed in the UK, across Europe, Scandinavia , the Middle and Far East. The average distance transported for each geographical market was calculated by multiplying the distance travelled by the percentage sales volume, by square meter. The weighted average distance per $1m^2$ was calculated by further multiplying the average calculated distance by the percentage sales for a region. Sales regions where sales were less than 1% were not considered.

Transport to site

Enter the distance that the product travels on its journey from the manufacturing site to construction/installation site as well as the transport mode used.

Description	Transport type	Distance
Delivery for Germany	Lorry, 16 - 32 metric ton	10.85 km
Delivery for Germany	Ship, sea	3.69 km
Delivery for France	Lorry, 16 - 32 metric ton	0.11 km
Delivery for France	Ship, sea	0.01 km
Ireland & Channel islands	Lorry, 16 - 32 metric ton	0.23 km
Ireland & Channel islands	Ship, sea	0.12 km
Delivery to Scandinavia	Lorry, 16 - 32 metric ton	0.35 km
Delivery to Scandinavia	Ship, sea	0.04 km
UK Direct Delivery	Van	215.66 km

Construction - Installation (A5)

Inputs

Scenario description
Describe the assumptions made for this scenario module that support the data you will enter, such as how the product is installed, what inputs (i.e. materials, energy, water) are required and what outputs (i.e. emission, wastes) are generated. Explain the basis upon which these assumptions have been made.
Description
Amtico Amtico Form (Artisan Wood & Contemporary Ceramic) should be bonded with a suitable low emissions adhesive to an appropriately prepared sub-floor as detailed in BS 8302. Full details on installation can be found at www.amtico.com. The adhesive used per 1m2 was calculated by the percentage sold multiplied by the recommended coat weight. The average distance transported for each geographical market was calculated by multiplying the distance travelled by the percentage sales volume by kg. See Adhesive Delivery and Coat Weight Spreadsheet. Vinyl installation off cuts can be disposed of via recycling schemes such AgPR, or used in energy recovery scheme or landfill. Wherever possible it is recommended that products should always be recycled

Installation wastage rate
Add the percentage weight of the declared or functional unit of product that is lost during installation for example waste from cutting a tile product to a different size. Remember to also to account for this percentage (as a mass) in the 'waste' tab of this module!
3%

Ancillary materials

Material description	Material	Quantity	Distance by air	Distance by rail	Distance by land	Distance by sea
Acrylic Dispersion Adhesive	Multipurpose adhesive	0.29 kg	0 km	0 km	507 km	521 km

Fuel/Energy

Material description	Energy Source	Quantity
N/A		

Water		
Material description	**Water Input**	**Quantity**
N/A		

Emissions

To air		
Material description	**Flow**	**Quantity**
N/A		

To water		
Material description	**Flow**	**Quantity**
N/A		

To soil		
Material description	**Flow**	**Quantity**
N/A		

Waste

Material wastes		
Material description	**Waste stream**	**Quantity**
Installation Offcuts	Polyvinylchloride (PVC) waste to landfill	0.1 kg
Packaging	Paper/cardboard waste to recycling	0.18 kg
Plastic Packaging	Polyethylene (PE) waste to recycling	0.01 kg
Wood	Wood waste to recycling	0.24 kg

Water discharged		
Material description	**Waste stream**	**Quantity**
N/A		

Use Stage

Maintenance (B2)

Inputs

Scenario description

Describe the assumptions made for this scenario module that support the data you will enter, such as how the product is maintenained, what inputs (i.e. materials, energy, water) are required and what outputs (i.e. emission, wastes) are generated. Explain the basis upon which these assumptions have been made.

Description
The required recommended cleaning and maintenance regime is dependent on the place of installation and the foot traffic over the floor. High traffic areas will generally require more cleaning and maintenance than low traffic situations. Dry cleaning may be performed with a dust mop. Wet cleaning can be performed with a mop, detergent and water. The use of power cleaners such as vacuum cleaners/rotary cleaners/scrubber driers was not included. For one year 3.2L/m^2 water and, 0.0416kg/m^2 detergent Floor cleaning detergents are locally readily available, assumed distance 10km Floor cleaning detergents are locally readily available, assumed distance 10km

Frequency of maintenance

Add the expected number of maintenance cycles required to maintain the product, per year, for example, if a tile requires washing once a week, then the number of cycles per year is 52. If the maintenance takes place less regularly than annually, for example every 4 years, then your frequency of maintenance per year will be: (1 / 4).

52per year

Ancillary materials

Material description	Material	Quantity	Distance by air	Distance by rail	Distance by land	Distance by sea
Floor Cleaning Detergent	Detergent, 25% active	0.0008 kg	0 km	0 km	10 km	0 km

Fuel/Energy

Material description	Energy Source	Quantity
N/A		

Water

Material description	Water Input	Quantity
Water	Tap water (m^3)	0.000062 m^3

Emissions

To air

Material description	Flow	Quantity
N/A		

To water

Material description	Flow	Quantity
N/A		

To soil

Material description	Flow	Quantity
N/A		

Waste

Material wastes

Material description	Waste stream	Quantity
Detergent Packaging	Polypropylene (PP) waste to recycling proxy	0.00002 kg

Water discharged		
Material description	**Waste stream**	**Quantity**
Cleaning water	Wastewater to sewer (m^3)	0.000062 m^3

End-of-life

Deconstruction (C1)

Inputs

Scenario description

Describe the assumptions made for this scenario module that support the data you will enter, such as how the product is distmantled at the end of its life in the building, what inputs (i.e. materials, energy, water) are required and what outputs (i.e. emission, wastes) are generated. Explain the basis upon which these assumptions have been made.

Description
At the end of the product's life, the flooring is mechanically removed from the sub-floor and disposed of by landfill, Incineration/energy recovery, or recycled. Landfill 87%Incineration/energy recovery 12% Recycling 1%

Ancillary materials

Material description	Material Quantity	Distance by air	Distance by rail	Distance by land	Distance by sea
N/A					

Fuel/Energy

Material description	Energy Source	Quantity
N/A		

Water

Material description	Water Input	Quantity
N/A		

Emissions

To air

Material description	Flow	Quantity
N/A		

To water

Material description	Flow	Quantity
N/A		

To soil

Material description	Flow	Quantity
N/A		

Waste

Material wastes

Material description	Waste stream	Quantity
N/A		

Water discharged

Material description	Waste stream	Quantity
N/A		

Transport (C2)

Transport

Scenario description

Enter the distance that the product travels from installation site to the end-of-life destination as well as the transport mode used.

Description
At the end of the product's life, the flooring is mechanically removed from the sub-floor and disposed of by landfill, Incineration/energy recovery or recycling Landfill, 87%Incineration/energy recovery 12% Recycling 1% It has been assumed that the maximum distance to a landfill disposal, incineration or recycling plant will be 200km.

Transport

Enter the distance that the product travels from installation site to the end-of-life destination as well as the transport mode used. Note that if more than one end-of-life destination is selected (i.e. a portion of the declared unit goes to one destination and a portion to another), you will need to multiply the different distances by the percentage of product travelling that distance. You can describe this in the scenario description.

Description	Transport type	Distance
Disposal from demolition site to landfill	Lorry, 16 - 32 metric ton	174 km
Disposal from demolition site to incinerator	Lorry, 16 - 32 metric ton	24 km
Disposal from demolition site to recycling plant	Lorry, 16 - 32 metric ton	2 km

Waste processing (C3)

Inputs

Scenario description

Describe the assumptions made for this scenario module that support the data you will enter, such as any pre-processing that the product undergoes after being dismantled from the building but before reaching its end-of-life destination, including what inputs (i.e. materials, energy, water) are required and what outputs (i.e. emission, wastes) are generated. Explain the basis upon which these assumptions have been made.

Description
The floor is mechanically removed from the installation and is then processed as follows, Landfill 87%. No further processing required. Incineration/energy recovery 12%. No further processing required. Recycling 1%. No further processing considered.

Ancillary materials

Material description	Material Quantity	Distance air	Distance by rail	Distance by land	Distance by sea
N/A					

Fuel/Energy

Material description	Energy Source	Quantity
N/A		

Water

Material description	Water Input	Quantity
N/A		

Emissions

To air

Material description	Flow	Quantity
N/A		

To water

Material description	Flow	Quantity
N/A		

To soil

Material description	Flow	Quantity
N/A		

Waste

Material wastes		
Material description	**Waste stream**	**Quantity**
BRE BREEAM PEP scheme used a recycling figure of 1% in its calculations. (2008). An Axion report "Post-Zero Avoidable Waste in Flooring-Towards a Circular Economy", published February 2022, also has a figure of 1%.	Polyvinylchloride (PVC) waste to recycling proxy	0.0345 kg
Data for post-consumer recycling rates for vinyl flooring is limited. BRE BREEAM PEP scheme used an energy recovery figure of 12% in its calculations. (2008).	Polyvinylchloride (PVC) waste to incineration	0.414 kg

Water discharged		
Material description	**Waste stream**	**Quantity**
N/A		

Disposal (C4)

Disposal

Scenario description
Describe what are the selected end-of-life destinations of the declared or functional unit at end-of-life, including any splits of the product to different waste routes. Explain the basis upon which these assumptions have been made.
Description
At the end of the product's life, the flooring is mechanically removed from the sub-floor and disposed of by landfill, Incineration/energy recovery or recycling Landfill, 87%Incineration/energy recovery 12% Recycling 1% It has been assumed that the maximum distance to a landfill disposal, incineration or recycling plant will be 200km.

Disposal		
Material description	**Waste route**	**Quantity**
Amtico Form Post-consumer waste	Polyvinylchloride (PVC) waste to landfill	3.0015 kg

Benefits & loads beyond system

Benefits & loads beyond system (D)

Recycling & Incineration

Recycling		
Process description	**Process**	**Quantity**
BRE BREEAM PEP scheme used a recycling figure of 1% in its calculations. (2008). An Axion report "Post-Zero Avoidable Waste in Flooring-Towards a Circular Economy", published February 2022, also has a figure of 1%.	Benefits due to recycling of Polyvinyl chloride (PVC) suspension	0.0345 kg

Incineration		
Process description	**Process**	**Quantity**
Data for post-consumer recycling rates for vinyl flooring is limited. BRE BREEAM PEP scheme used an energy recovery figure of 12% in its calculations. (2008).	Benefits due to incineration of waste PVC	0.414 kg

Landfill
[no data]

Amtico Form Bio (Oct 2024G) - Average values

Indicator	Unit	A1	A2	A3	A4	A5	B2
		Raw material supply	Transport	Manufacturing	Transport to site	Construction - Installation	Maintenance
Core Environmental impact indicators							
GWP-total	kg CO2 eq	3.83e+0	1.78e-1	1.69e+0	1.40e+0	1.18e+0	1.27e+0
GWP-fossil	kg CO2 eq	3.89e+0	1.78e-1	1.95e+0	1.40e+0	7.41e-1	1.22e+0
GWP-biogenic	kg CO2 eq	-6.11e-1	1.42e-4	-2.62e-1	3.21e-3	3.54e-1	4.76e-2
GWP-luluc	kg CO2 eq	5.48e-1	7.48e-5	2.88e-3	8.90e-4	8.38e-2	1.12e-3
ODP	kg CFC11 eq	7.90e-6	4.14e-8	1.51e-7	2.93e-7	3.26e-7	1.21e-7
AP	mol H+ eq	3.13e-2	1.55e-3	5.11e-3	7.81e-3	4.27e-3	9.03e-3
EP-freshwater	kg P eq	4.02e-3	1.03e-5	2.92e-4	2.09e-4	6.83e-4	5.25e-4
EP-marine	kg N eq	8.32e-3	4.19e-4	1.56e-3	2.37e-3	1.36e-3	5.20e-3
EP-terr	mol N eq	7.20e-2	4.62e-3	1.44e-2	2.60e-2	9.43e-3	1.60e-2
POCP	kg NMVOC eq	1.48e-2	1.33e-3	3.69e-3	8.46e-3	2.85e-3	5.22e-3
ADPE	kg Sb eq	5.84e-5	3.85e-7	4.82e-6	2.13e-5	1.04e-5	1.74e-5
ADPF	MJ	1.09e+2	2.70e+0	4.39e+1	2.07e+1	1.75e+1	3.55e+1
WDP	m3 depriv.	2.49e+0	1.21e-2	3.95e-1	1.53e-1	8.68e-1	1.55e+0
Additional Environmental impact indicators							
PM	p inc.	2.44e-7	1.84e-8	4.17e-8	1.52e-7	4.27e-8	1.05e-7
IR	kBq U-235 eq	5.34e-1	1.34e-2	1.13e+0	1.32e-1	1.18e-1	7.26e-2
ETP-fw	CTUe	1.38e+2	2.04e+0	2.09e+1	2.09e+1	2.12e+1	1.01e+2
HTP-c	CTUh	4.00e-9	6.77e-11	8.45e-10	2.30e-9	5.60e-10	3.35e-9
HTP-nc	CTUh	8.37e-8	2.14e-9	1.28e-8	2.70e-8	1.39e-8	6.36e-8
SQP	Pt	6.97e+1	2.70e+0	4.21e+1	9.82e+0	9.56e+0	5.56e+0
Resource use							
PERE	MJ	-1.39e+1	3.21e-2	6.22e+0	5.72e-1	-3.09e+0	1.59e+0
PERM	MJ	3.69e+1	0.00e+0	5.26e+0	0.00e+0	6.66e+0	0.00e+0
PERT	MJ	2.30e+1	3.21e-2	1.15e+1	5.72e-1	3.57e+0	1.59e+0
PENRE	MJ	9.54e+1	2.64e+0	3.85e+1	2.04e+1	8.12e+0	1.30e+1
PENRM	MJ	1.28e+1	0.00e+0	5.53e+0	0.00e+0	7.49e+0	2.09e+1
PENRT	MJ	1.08e+2	2.64e+0	4.41e+1	2.04e+1	1.56e+1	3.39e+1
SM	kg	3.09e-2	0.00e+0	1.61e-1	0.00e+0	5.80e-3	3.95e-3
RSF	MJ	0.00e+0	0.00e+0	3.98e-7	0.00e+0	1.19e-8	0.00e+0
NRSF	MJ	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
FW	m3	5.93e-2	2.98e-4	9.84e-3	3.82e-3	2.05e-2	3.66e-2
Waste categories							
HWD	kg	3.43e-1	2.94e-3	7.97e-2	4.40e-2	5.50e-2	9.13e-2
NHWD	kg	8.21e+0	4.67e-2	1.27e+0	9.02e-1	1.27e+0	1.61e+0
RWD	kg	3.55e-4	1.54e+1	3.10e-4	1.36e+2	4.62e-1	2.37e-1
Output flows							
CRU	kg	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	1.75e-1	0.00e+0	3.66e-1	5.65e-2
MER	kg	0.00e+0	0.00e+0	2.56e-8	0.00e+0	6.76e-9	0.00e+0
EEE	MJ	0.00e+0	0.00e+0	1.19e-4	0.00e+0	3.56e-6	0.00e+0
EET	MJ	0.00e+0	0.00e+0	6.66e-4	0.00e+0	2.00e-5	0.00e+0
Information on biogenic carbon content							
Product C content	kg C	-8.46e-1	0.00e+0	8.61e-3	0.00e+0	-1.20e-2	0.00e+0
Packaging C content	kg C	0.00e+0	0.00e+0	-1.38e-1	0.00e+0	7.67e-2	0.00e+0

Indicator	Unit	C1	C2	C3	C4	D
		Deconstruction	Transport	Waste processing	Disposal	Benefits & loads beyond system
Core Environmental impact indicators						
GWP-total	kg CO2 eq	0.00e+0	1.15e-1	8.87e-1	2.53e-1	-3.24e-1
GWP-fossil	kg CO2 eq	0.00e+0	1.15e-1	8.85e-1	2.53e-1	-3.20e-1
GWP-biogenic	kg CO2 eq	0.00e+0	9.78e-5	1.86e-3	3.18e-4	-3.48e-3
GWP-luluc	kg CO2 eq	0.00e+0	4.50e-5	1.29e-4	3.31e-5	-3.32e-4
ODP	kg CFC11 eq	0.00e+0	2.65e-8	2.84e-8	9.63e-9	-5.61e-8
AP	mol H+ eq	0.00e+0	4.66e-4	6.85e-4	2.76e-4	-1.76e-3
EP-freshwater	kg P eq	0.00e+0	7.39e-6	3.99e-5	4.63e-6	-1.54e-4
EP-marine	kg N eq	0.00e+0	1.40e-4	2.02e-4	1.19e-3	-2.77e-4
EP-terr	mol N eq	0.00e+0	1.53e-3	1.84e-3	1.01e-3	-2.75e-3
POCP	kg NMVOC eq	0.00e+0	4.69e-4	5.17e-4	3.44e-4	-8.09e-4
ADPE	kg Sb eq	0.00e+0	3.99e-7	1.00e-6	1.05e-7	-1.43e-6
ADPF	MJ	0.00e+0	1.73e+0	1.48e+0	7.49e-1	-5.55e+0
WDP	m3 depriv.	0.00e+0	7.80e-3	1.65e+0	3.35e-2	-1.48e-1
Additional Environmental impact indicators						
PM	p inc.	0.00e+0	9.90e-9	5.92e-9	5.45e-9	-1.32e-8
IR	kBq U-235 eq	0.00e+0	8.91e-3	9.84e-3	3.54e-3	-6.60e-2
ETP-fw	CTUe	0.00e+0	1.35e+0	4.88e+1	1.16e+1	-5.08e+0
HTP-c	CTUh	0.00e+0	4.38e-11	1.92e-10	2.56e-11	-1.10e-10
HTP-nc	CTUh	0.00e+0	1.42e-9	1.37e-8	2.25e-9	-3.23e-9
SQP	Pt	0.00e+0	1.19e+0	8.64e-1	1.78e+0	-1.35e+0
Resource use						
PERE	MJ	0.00e+0	2.44e-2	1.26e-1	1.34e-2	-4.79e-1
PERM	MJ	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
PERT	MJ	0.00e+0	2.44e-2	1.26e-1	1.34e-2	-4.79e-1
PENRE	MJ	0.00e+0	1.70e+0	-9.02e+0	-6.38e+1	-2.64e+0
PENRM	MJ	0.00e+0	0.00e+0	1.04e+1	6.46e+1	7.42e-1
PENRT	MJ	0.00e+0	1.70e+0	1.35e+0	7.36e-1	-1.90e+0
SM	kg	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
NRSF	MJ	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
FW	m3	0.00e+0	1.93e-4	3.85e-2	7.88e-4	-3.63e-3
Waste categories						
HWD	kg	0.00e+0	1.91e-3	2.29e-1	1.49e-3	-9.12e-3
NHWD	kg	0.00e+0	3.39e-2	5.64e-1	3.03e+0	-6.99e-1
RWD	kg	0.00e+0	1.17e-5	6.74e-6	4.44e-6	-1.59e-5
Output flows						
CRU	kg	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
MFR	kg	0.00e+0	0.00e+0	3.45e-2	0.00e+0	0.00e+0
MER	kg	0.00e+0	0.00e+0	4.14e-1	0.00e+0	0.00e+0
EEE	MJ	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
EET	MJ	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
Information on biogenic carbon content						
Product C content	kg C	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
Packaging C content	kg C	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0