



# Statement of Verification

BREG EN EPD No: 000759

Issue: 01

This is to verify that the Environmental Product Declaration provided by:

## Amtico International

are in accordance with the requirements of:

**EN 15804:2012+A2:2019**

and

BRE Global Scheme Document SD207

This declaration is for:

1m<sup>2</sup> Amtico Spacia (C & D) (4.286kg/m<sup>2</sup>)

### Company Address

Amtico International  
Kingfield Road,  
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UK  
CV6 5AA



*Hayley Thomson*  
Signed for BRE Global Limited

Hayley Thomson  
Operator

20 February 2026  
Date of this Issue

20 February 2026  
Date of First Issue

19 February 2031  
Expiry Date



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# Environmental Product Declaration

EPD Number: 000759

## General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE 2025 Product Category Rules (PN 514 Rev 3.2) for Type III environmental product declaration of construction products to EN 15804:2012+A2:2019
Commissioner of LCA study	LCA consultant/Tool
Amtico International Kingfield Road, Coventry UK CV6 5AA	John Baggaley/BRE LINA A2
Declared/Functional Unit	Applicability/Coverage
1m <sup>2</sup> Amtico Spacia (C & D) (4.286kg/m <sup>2</sup> )	Product Average.
EPD Type	Background database
Cradle to Gate with options	Ecoinvent v3.8
Demonstration of Verification	
CEN standard EN 15804 serves as the core PCR <sup>a</sup>	
Independent verification of the declaration and data according to EN ISO 14025:2010 <input checked="" type="checkbox"/> Internal <input type="checkbox"/> External	
(Where appropriate <sup>b</sup> )Third party verifier: Bala Subramanian	
a: Product category rules b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4)	
Comparability	
Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A2:2019 for further guidance	



## Information modules covered

Product			Construction		Use stage							End-of-life				Benefits and loads beyond the system boundary
A1	A2	A3	A4	A5	Related to the building fabric					Related to the building						D
					B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, Recovery and/or Recycling potential
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													

Note: Ticks indicate the Information Modules declared.

### Manufacturing site(s)

Made under-contract in Shanghai, China and Jiangsu, China.

### Construction Product:

#### Product Description

Amtico Spacia is a LVT Flooring collection, consisting of a range of Wood and Stone designs, available in a range of finishes, sizes and parquet laying patterns.

Amtico Spacia products have a total thickness of 2.5mm with a 0.55mm wear layer, providing a usage classification (EN ISO 10582) of

1. 23 Heavy Domestic
2. 33 Heavy Commercial
3. 42 General Light Industrial

The Spacia Collection comes with a 25 year wear out warranty for residential installation and 10 years for commercial use.

Spacia is manufactured from ortho-phthalate free plasticisers, contains up to 25% 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.

Spacia is a low VOC product, certified to Eurofins Indoor Air Comfort Gold and Finnish RTS M1.



## Technical Information

Property	Value, Unit
Manufacturing Standard (EN ISO 10582)	Conforms
Wear Layer Thickness (EN ISO 24340)	0.55mm
Usage Classification (EN ISO 10874)	23, 34, 42
Total Thickness (EN ISO 24346)	2.5mm
Weight (EN ISO 23997)	4.286kg/m <sup>2</sup>
Flammability /Smoke Emissions (EN 13501-1)	Bfl s1
Slip Resistance (EN13893)	Class DS
Electrostatic Propensity EN 1815	≤ 2kV
Thermal Resistance EN 12664	0.0124-0.0166 m <sup>2</sup> K/W
VOC Emissions Eurofins Indoor Air Comfort Gold	IACG-352-02-05-2023B

Note: the technical information is extracted from Amico Spacia specification sheet. For more information, please contact Amtico or visit [Amtico Spacia Collection | 0.55mm Commercial LVT](#)

## Amtico Spacia

Versatile design-led flooring that's readily available

Total thickness of product: 2.5mm\*

### A. Quantum Guard Elite

Amtico's patented urethane formula provides superior durability and resistance against abrasions and stains. The reinforced low gloss finish is highly realistic.

### B. High density 0.55mm wear layer

Toughened upper layer, giving excellent impact resistance and high clarity, allowing the product designs to shine through.

### C. Design layer

Carefully crafted print films create the distinctive Amtico Wood, Stone and Abstract product designs.

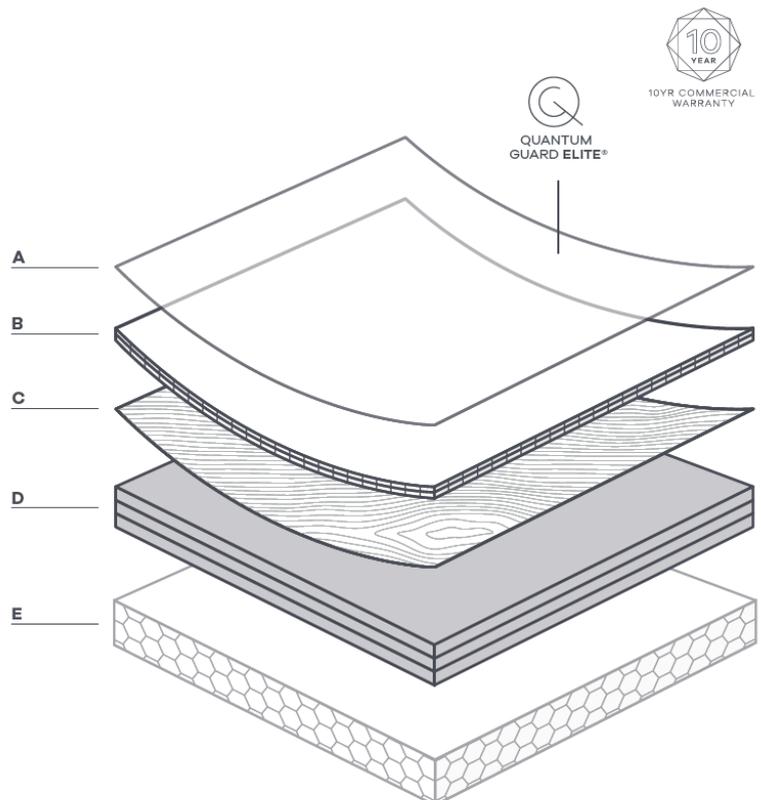
### D. Backing layers

The foundation of the product, providing long lasting stability. Contains up to 32% recycled pre-consumer content.

### E. Acoustic backing layer (optional)

Reduces the impact sound by up to 18dB and provides an extra level of comfort underfoot.

\* 3.5mm with optional Acoustic backing





## Main Product Contents

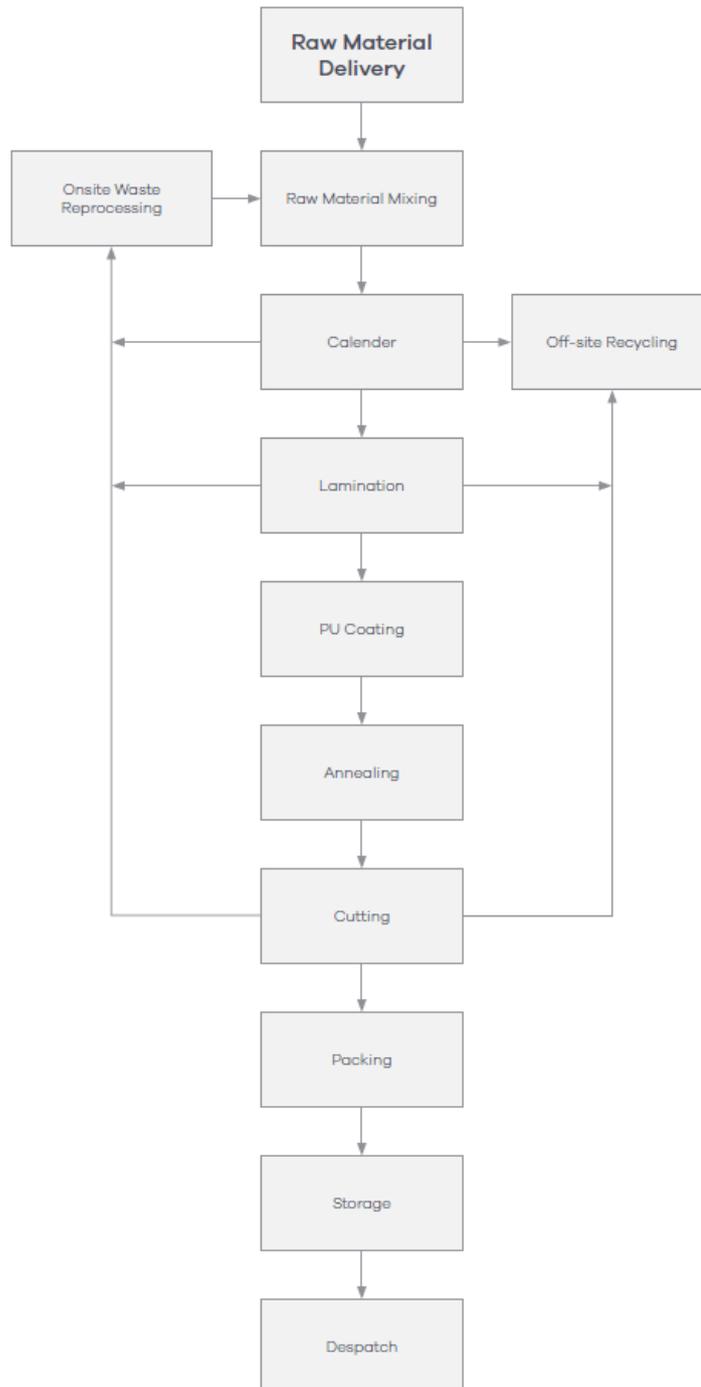
Material/Chemical Input	%
Wear Layer	15-25
Polyvinyl Chloride	20-30
Plasticisers	7-8
Print Film	2-2.5
Calcium Carbonate	35-50
Stabiliser, Process Aids & Pigments	<1

## Manufacturing Process

The product is constructed by the thermal lamination of the wear layer, print film and backing plies. The wear layer and backing plies are all manufactured as follows

1. Required ply raw materials are initially blended
2. The ply blend is then heated and calendered on a mill to produce a ply of the required thickness.
3. The plies required to form the end product, along with the print film, are then thermally laminated together under pressure, to form the final product.
4. The product is then coated with polyurethane, before being cut to size, boxed and dispatched to the customer.
5. Cutting waste is reground on-site and reused in the production of further backing plies.

## Process flow diagram



## Construction Installation

Amtico Spacia (C & D) should be bonded with a suitably low emissions adhesive to an appropriately prepared subfloor as detailed in BS 8203. Details for Amtico Spacia (C & D) installation can be found at [www.amtico.com](http://www.amtico.com)



### **Use Information**

All Amtico Spacia manufacturing sites are all certificated to ISO 9001 and ISO 14001. Amtico Spacia adheres to the emission requirements of Indoor Air Comfort Gold, German AgBB/DIBt, Belgium, and is rated as A+ in the French "Emissions dans l'air interieur" scheme.

### **End of Life**

At the end of the product's life, the flooring is mechanically removed from the subfloor and disposed of by landfill, incineration/energy recovery or recycling. It is assumed that no energy required to remove the floor.

It is assumed that 87% of the product will go to landfill, 12% to incineration/energy recovery schemes and 1% to recycling. The distance travelled from the demolition site to a disposal site will be no more than 200km.



## Life Cycle Assessment Calculation Rules

### Declared / Functional unit description

1m<sup>2</sup> Amtico Spacia (C & D) (4.286kg/m<sup>2</sup>)

### System boundary

This is a cradle-to-gate with options LCA study that follows the modular approach defined in EN15804:2012+A2:2019 and BRE 2025 Product Category Rules (PN 514 Rev 3.2) and includes the processes covered in the manufacturing site and product stage (A1 to A3), construction stage (A4, A5), use stage (B2), end-of-life stage (C1-C4) and benefits beyond system boundary (D).

### Data sources, quality and allocation

Spacia (C & D) are produced at 2 manufacturing sites in China. Therefore, two sets of data collections have been used, and the results in the EPD are based on the weighted average. Specific primary data derived from Amtico's Chinese production process in the manufacturing factories, have been modelled using the BRE LINA A2 software and the Ecoinvent v3.8 (2021) database. In accordance with the requirements of EN15804:2012+A2:2019, the most current available data has been used. The manufacturer-specific data covers a period of one year (01/01/2021 – 31/12/2021). Secondary data has been obtained for all other upstream and downstream processes that are beyond the control of the manufacturer (i.e. raw material production) from the Ecoinvent v3.8 (2021) database. All Ecoinvent v3.8 (2021) datasets are complete within the context used and conform to the system boundary and the criteria for the exclusion of inputs and outputs, according to the requirements specified in EN15804:2012+A2:2019.

Other LVT products are manufactured at the production sites, in addition to the product covered by this EPD. Calculations were performed to enable allocation of total site energy use, water and waste to the Amtico Spacia (C & D) product. Allocation procedures were by mass allocation and are according to EN 15804 and are based on the ISO14044 guidance. All the input and output materials such as packaging, transportation, energy, water use and wastes are included. Only exceptions are outputs to air, water or soil as these are not measured at the site.

The manufactured product is shipped to Coventry for distribution across UK, Ireland and the Middle East. Product for European distribution is shipped directly to Amtico's German distribution centre. Far East and Asia and Australia markets are served directly from the Chinese factory. The average distance transported for each geographical market was calculated by multiplying the distance travelled by the percentage sales volume by square meter. Regions where sales were less than 1% were not considered.

The electricity supply was determined by the electricity supplier's meters. The assumed Chinese electricity emission factor was 1.05 kg CO<sub>2</sub> eq./kWh (consumption mix, China). Wastewater to sewer was determined by a water meter.

Module C4 end of life assumes that 1% of the PVC flooring is recycled, 12% is used in energy recovery/incineration, with the remainder going to landfill. This ratio is based on a study performed by BRE.

Quality Level	Geographical representativeness	Technical representativeness	Time representativeness
Very Good	Data from area under study.	Data from processes and products under study. Same state of technology applied as defined in goal and scope (i.e. identical technology).	There is less than 5 years between the the Ecoinvent v3.8 (2021) LCI reference year, and the time period for which the LCA was undertaken.



Specific Chinese datasets have been selected from the Ecoinvent v3.8 (2021) LCI for this LCA. The quality level of geographical and technical representativeness is therefore Very Good. The quality level of time representativeness is Very Good as the background LCI datasets are based on Ecoinvent v3.8 (2021) which was compiled in 2021. Therefore, there is less than 5 years between the Ecoinvent v3.8 (2021) LCI reference year and the time period for which the LCA was undertaken.

### **Cut-off criteria**

All stages of the manufacturing process have been included. Ancillary materials are not recorded at manufacturing sites. Transport distances to site were not calculated for Sales Business Units with <1% of product sales. The product life was based on the residential 25-year warranty. All inputs or outputs have been included and all raw materials, packaging and transport, energy, water use and wastes, are included, except for direct emissions to air, water and soil, which are not measured. Upstream extraction and/or processing of inputs are included within the use of the background datasets within LINA.



## LCA Results

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO <sub>2</sub> eq	kg CFC11 eq	mol H <sup>+</sup> eq	kg (PO <sub>4</sub> ) <sup>3-</sup> eq			
Product stage	Raw material supply	A1	9.21E+00	9.22E+00	-1.80E-02	7.95E-03	1.03E-05	4.19E-02	2.53E-03
	Transport	A2	9.94E-02	9.93E-02	9.15E-05	3.72E-05	2.34E-08	4.10E-04	6.28E-06
	Manufacturing	A3	1.79E+00	2.00E+00	-2.18E-01	1.31E-03	5.16E-08	9.51E-03	3.84E-04
	Total (Consumption grid)	A1-3	1.11E+01	1.13E+01	-2.36E-01	9.30E-03	1.04E-05	5.18E-02	2.92E-03
Construction process stage	Transport	A4	8.95E-01	8.93E-01	1.39E-03	5.94E-04	1.84E-07	1.23E-02	1.02E-04
	Construction	A5	1.16E+00	8.61E-01	2.34E-01	6.76E-02	3.88E-07	4.55E-03	6.41E-04
	Maintenance	B2	1.31E+00	1.26E+00	4.77E-02	1.15E-03	1.30E-07	9.28E-03	5.32E-04
<b>87% Landfill, 12% Incineration/Energy Recovery, 1% Recycled</b>									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.43E-01	1.42E-01	1.21E-04	5.59E-05	3.30E-08	5.78E-04	9.18E-06
	Waste processing	C3	1.10E+00	1.10E+00	2.31E-03	1.60E-04	3.53E-08	8.51E-04	4.96E-05
	Disposal	C4	3.15E-01	3.14E-01	3.95E-04	4.12E-05	1.20E-08	3.43E-04	5.75E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.00E-01	-3.94E-01	-4.86E-03	-3.87E-04	-7.18E-08	-2.17E-03	-1.96E-04

GWP-total = Global warming potential, total;  
 GWP-fossil = Global warming potential, fossil;  
 GWP-biogenic = Global warming potential, biogenic;  
 GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;  
 AP = Acidification potential, accumulated exceedance; and  
 EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts			EP-marine	EP-terrestrial	POCP	ADP-mineral & metals	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m <sup>3</sup> world eq deprived	disease incidence
Product stage	Raw material supply	A1	7.99E-03	8.02E-02	2.63E-02	1.21E-04	1.89E+02	5.69E+00	3.92E-07
	Transport	A2	1.24E-04	1.36E-03	4.28E-04	2.79E-07	1.53E+00	7.18E-03	1.03E-08
	Manufacturing	A3	2.42E-03	2.31E-02	6.21E-03	4.05E-06	1.90E+01	4.06E-01	1.44E-07
	Total (Consumption grid)	A1-3	1.05E-02	1.05E-01	3.29E-02	1.26E-04	2.10E+02	6.11E+00	5.47E-07
Construction process stage	Transport	A4	3.23E-03	3.57E-02	1.00E-02	9.81E-06	1.27E+01	7.62E-02	7.60E-08
	Construction	A5	1.30E-03	9.48E-03	3.13E-03	1.21E-05	1.86E+01	9.65E-01	4.74E-08
	Maintenance	B2	5.27E-03	1.68E-02	5.49E-03	1.81E-05	3.61E+01	1.56E+00	1.10E-07
<b>87% Landfill, 12% Incineration/Energy Recovery, 1% Recycled</b>									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.74E-04	1.90E-03	5.83E-04	4.95E-07	2.15E+00	9.69E-03	1.23E-08
	Waste processing	C3	2.51E-04	2.28E-03	6.42E-04	1.24E-06	1.83E+00	2.05E+00	7.35E-09
	Disposal	C4	1.47E-03	1.25E-03	4.27E-04	1.31E-07	9.30E-01	4.17E-02	6.77E-09
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.26E-04	-3.41E-03	-9.57E-04	-1.77E-06	-7.10E+00	-2.04E-01	-1.54E-08

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;  
 EP-terrestrial = Eutrophication potential, accumulated exceedance;  
 POCP = Formation potential of tropospheric ozone;  
 ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;

ADP-fossil = Depletion potential of the stratospheric ozone layer;  
 WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and  
 PM = Particulate matter.



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

			Parameters describing environmental impacts				
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U <sup>235</sup> eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	5.56E-01	1.80E+02	6.11E-09	1.44E-07	2.90E+01
	Transport	A2	7.78E-03	1.19E+00	3.54E-11	1.28E-09	1.45E+00
	Manufacturing	A3	6.19E-02	4.42E+01	1.06E-09	2.08E-08	2.57E+01
	Total (Consumption grid)	A1-3	6.26E-01	2.25E+02	7.20E-09	1.66E-07	5.61E+01
Construction process stage	Transport	A4	7.42E-02	1.14E+01	1.19E-09	1.34E-08	4.84E+00
	Construction	A5	8.49E-02	2.24E+01	6.57E-10	1.57E-08	7.45E+00
	Maintenance	B2	7.69E-02	1.01E+02	3.43E-09	6.45E-08	5.85E+00
<b>87% Landfill, 12% Incineration/Energy Recovery, 1% Recycled</b>							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.11E-02	1.68E+00	5.44E-11	1.76E-09	1.48E+00
	Waste processing	C3	1.22E-02	6.06E+01	2.39E-10	1.71E-08	1.07E+00
	Disposal	C4	4.40E-03	1.44E+01	3.18E-11	2.79E-09	2.21E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-9.07E-02	-5.61E+00	-1.68E-10	-4.14E-09	-1.64E+00

IRP = Potential human exposure efficiency relative to U235;  
ETP-fw = Potential comparative toxic unit for ecosystems;  
HTP-c = Potential comparative toxic unit for humans;

HTP-nc = Potential comparative toxic unit for humans; and  
SQP = Potential soil quality index.



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

			Parameters describing resource use, primary energy					
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	8.23E+00	0.00E+00	8.23E+00	1.14E+02	7.32E+01	1.87E+02
	Transport	A2	2.01E-02	0.00E+00	2.01E-02	1.49E+00	0.00E+00	1.49E+00
	Manufacturing	A3	2.03E+00	3.17E+00	5.20E+00	-2.78E+01	4.34E+01	1.56E+01
	Total (Consumption grid)	A1-3	1.03E+01	3.17E+00	1.35E+01	8.78E+01	1.17E+02	2.04E+02
Construction process stage	Transport	A4	2.78E-01	0.00E+00	2.78E-01	1.25E+01	0.00E+00	1.25E+01
	Construction	A5	-1.17E+00	4.10E+00	2.93E+00	8.64E+00	7.98E+00	1.66E+01
	Maintenance	B2	1.61E+00	0.00E+00	1.61E+00	1.37E+01	2.09E+01	3.45E+01
<b>87% Landfill, 12% Incineration/Energy Recovery, 1% Recycled</b>								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.03E-02	0.00E+00	3.03E-02	2.11E+00	0.00E+00	2.11E+00
	Waste processing	C3	1.56E-01	0.00E+00	1.56E-01	-1.12E+01	1.29E+01	1.68E+00
	Disposal	C4	1.66E-02	0.00E+00	1.66E-02	-7.93E+01	8.02E+01	9.15E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-8.08E-01	0.00E+00	-8.08E-01	-6.18E+00	-9.21E-01	-7.11E+00

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;  
 PERM = Use of renewable primary energy resources used as raw materials;  
 PERT = Total use of renewable primary energy resources;

PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;  
 PENRM = Use of non-renewable primary energy resources used as raw materials;  
 PENRT = Total use of non-renewable primary energy resource



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m <sup>3</sup>
Product stage	Raw material supply	A1	2.60E-02	0.00E+00	0.00E+00	2.02E-01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	1.77E-04
	Manufacturing	A3	1.26E-01	0.00E+00	0.00E+00	1.09E-02
	Total (Consumption grid)	A1-3	1.52E-01	0.00E+00	0.00E+00	2.13E-01
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	1.90E-03
	Construction	A5	4.56E-03	0.00E+00	0.00E+00	2.48E-02
	Maintenance	B2	3.95E-03	0.00E+00	0.00E+00	3.67E-02
<b>87% Landfill, 12% Incineration/Energy Recovery, 1% Recycled</b>						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	2.40E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	4.78E-02
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	9.79E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.78E-04	0.00E+00	0.00E+00	-5.00E-03

SM = Use of secondary material;  
RSF = Use of renewable secondary fuels;

NRSF = Use of non-renewable secondary fuels;  
FW = Net use of fresh water



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	6.32E-01	1.13E+01	2.13E-04
	Transport	A2	1.63E-03	2.85E-02	5.93E+00
	Manufacturing	A3	2.05E-01	1.57E+00	1.64E-05
	Total (Consumption grid)	A1-3	8.38E-01	1.29E+01	5.93E+00
Construction process stage	Transport	A4	2.42E-02	4.39E-01	6.03E+01
	Construction	A5	6.73E-02	1.39E+00	1.78E-01
	Maintenance	B2	9.28E-02	1.64E+00	4.56E+00
<b>87% Landfill, 12% Incineration/Energy Recovery, 1% Recycled</b>					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.37E-03	4.22E-02	1.46E-05
	Waste processing	C3	2.84E-01	7.01E-01	8.38E-06
	Disposal	C4	1.85E-03	3.77E+00	5.52E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.49E-02	-1.16E+00	-2.78E-05

HWD = Hazardous waste disposed;  
 NHWD = Non-hazardous waste disposed;  
 RWD = Radioactive waste disposed



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing output flows – at end of life								
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
			kg	kg	kg	MJ per energy carrier	kg C	kg C
Product stage	Raw material supply	A1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	-3.60E-03
	Total (Consumption grid)	A1-3	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	-3.60E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	2.69E-01	4.03E-09	0.00E+00	1.31E-02	5.42E-02
	Maintenance	B2	0.00E+00	5.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>87% Landfill, 12% Incineration/Energy Recovery, 1% Recycled</b>								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	4.29E-02	5.14E-01	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;  
MFR = Materials for recycling

MER = Materials for energy recovery;  
EE = Exported Energy



## Scenarios and additional technical information

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
A4 – Transport to the building site	<p>Products manufactured in China are disturbed in the UK, across Europe, Scandinavia, the Middle and Far East. The below listed transportation distance is the total distance from the manufacturing site to the corresponding delivery location, the LCA calculation is based on the average distance transported for each geographical market was calculated by multiplying the distance travelled by the percentage sales volume by square meter and includes the shipping distance from China. Regions where sales were less than 1% of the total sales were not considered.</p> <p>The sales volumes were those in 2021. The transportation data is taken from Ecoinvent v3.8 (2021) datasets.</p>		
	<b>UK Direct Delivery: Road</b>	Diesel / Van	0.32l/km
	Distance:	km	117
	Capacity utilisation (incl. empty returns)	%	61
	Bulk density of transported products	kg/m <sup>3</sup>	1714
	<b>UK Direct Delivery: Sea</b>	Marine Bunker Oil / Container Ship	0.21tonnes/km
	Distance:	km	9089
	Capacity utilisation (incl. empty returns)	%	65
	Bulk density of transported products	kg/m <sup>3</sup>	1714
	<b>Worldwide: Road</b>	Diesel / 16–32 ton Lorry	0.032l/km
	Distance:	km	65
	Capacity utilisation (incl. empty returns)	%	61
	Bulk density of transported products	kg/m <sup>3</sup>	1714
	<b>Worldwide: Sea</b>	Marine Bunker Oil / Container Ship	0.21tonnes/km
	Distance:	km	5263
	Capacity utilisation (incl. empty returns)	%	65
Bulk density of transported products	kg/m <sup>3</sup>	1714	
A5 – Installation in the building	<p>Amtico Spacia (C &amp; D) should be bonded with a suitable, low emissions adhesive to an appropriately prepared subfloor as detailed in BS 8203. For full details on Amtico Spacia (C &amp; D) product installation, please see the relevant document at <a href="http://www.amtico.com">www.amtico.com</a></p>		
	Installation Wastage Rate	%	3
	Post installation Cleaning	l/m <sup>2</sup>	0.02



### Scenarios and additional technical information

Scenario	Parameter	Units	Results
	Material Waste	Installation off cuts mass per unit area of product installed kg/m <sup>2</sup>	0.1286
	Cardboard Packaging	Mass per unit area of product installed kg/m <sup>2</sup>	0.121
	Wood Packaging	Mass per unit area of Product installed kg/m <sup>2</sup>	0.132
	Shrink Wrap	Mass per unit area of product installed kg/m <sup>2</sup>	0.003
B2 – Maintenance	<p>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.</p> <p>Dry cleaning may be performed with a dust mop or with a vacuum cleaner. Wet cleaning can be performed with a mop, detergent and water. Power cleaning is also a possibility with scrubber driers etc.</p> <p>The calculations are assumed for 1m<sup>2</sup> per year.</p>		
	52 Wet Cleans per year (Water use)	l/yr./m <sup>2</sup>	3.224
	Detergent usage	kg/yr./m <sup>2</sup>	0.0416
	Transport distance	km	10
Reference service life	<p>Amtico International (hereinafter referred to as the Company) hereby guarantees that in the event of the Amtico Spacia (C &amp; D) flooring supplied to the original purchaser under this agreement, requiring replacement due to 'Wear-out' from normal foot traffic within twenty-five years from the date of purchase,</p> <p>The floor will be repaired or replaced with the same or similar material free of charge. 'Wear-out' means the removal of the pattern and colour from the Amtico Spacia (C &amp; D) floor caused by the removal of the protective wear layer.</p> <p>Reference service life used in LCA was the residential warranty.</p>		
	Residential Product Warranty.	Years	25
C1 to C4 End of life,	<p>Data for post-consumer end of life for PVC flooring scenarios is limited. BRE BREEAM PEP scheme (2008) assumed 87% went to landfill, 12% for incineration/energy recovery and 1% was recycled. An Axion report "Post-Zero Avoidable Waste in Flooring-Towards a Circular Economy", published February 2022, also has a figure of 1%. The 87:12:1 ratio was used in this study.</p>		
C1 – Deconstruction	<p>At the product's end of life that the product is manually mechanically removed from the sub-floor. No ancillary materials, energy or water was required for the process.</p> <p>It is assumed that 100% of the product is recovered at its end of life.</p>	kg/m <sup>2</sup>	4.286
C2 – Transport	<p>It has been assumed that the maximum distance to a landfill disposal, incineration or recycling plant will be 200km.</p>		
	Road transport (Diesel / 16–32 ton Lorry)	km	200
C3 – Waste Processing	<p>Minimal waste pre-processing was considered necessary with no further ancillary materials, energy or water required.</p>		
	12% is incinerated /energy recovery	kg/m <sup>2</sup>	0.5143



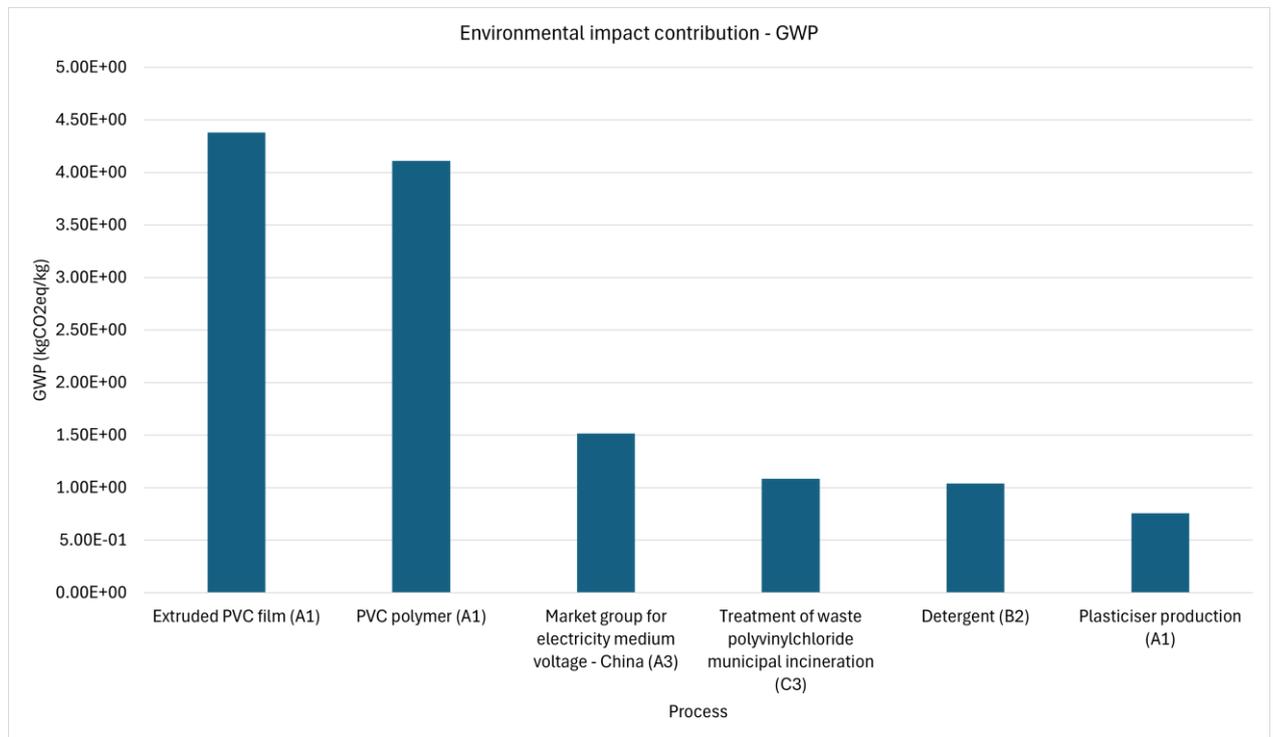
### Scenarios and additional technical information

Scenario	Parameter	Units	Results
	1% is recycled	kg/m <sup>2</sup>	0.04286
C4 – Disposal	87% of the material is assumed to go to landfill	kg/m <sup>2</sup>	3.7288
Module D	The pre-existing recycled content in the raw material can be omitted since it is less than 1 %. This is in line with the cut-off rule provisions of EN15804:2012+A2:2019.		
	For benefits due to incineration of PVC waste, the EU electricity (Electricity, high voltage (RER) market for electricity, high voltage) with an emission factor of 0.396kgCO <sub>2</sub> eq/kWh, EU heat (Heat, district or industrial, natural gas (RER) market for heat, district or industrial, natural gas) with an emission factor of 0.187kgCO <sub>2</sub> eq/kWh, and EU heat (Heat, district or industrial, other than natural gas (RER) market for heat, district or industrial, other than natural gas) with an emission factor of 0.244kgCO <sub>2</sub> eq/kWh extracted from ecoinvent 3.8 database have been used as the background data for the energy recovered.		
	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%.	kg/m <sup>2</sup>	0.04286
	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).	kg/m <sup>2</sup>	0.5143

## Summary, comments and additional information

### Interpretation

Out of the total mass of input materials, Filler accounts for 35-50%, PVC accounts for 20-30%, PVC layer and film account for 17-28% and other additives account for the remaining part. The bulk of the environmental impacts and primary energy demand are attributed to the manufacturing phase, covered by information modules A1-A3 of EN15804:2012+A2:2019. From the process level, extruded PVC film and PVC polymer production contributes the most on GWP emission across the whole life cycle stages.



## Front Cover Image



Figure 1

## About Amtico

### LVT is in our DNA.

Amtico is a British manufacturer of industry-leading flooring. A joint venture between American Biltrite and manufacturing giant Courtaulds, we began designing and making luxury vinyl tiles (LVT) in 1964. We're located in Coventry, a historic city, globally recognised for its continued contribution to British design, craft and engineering.

Today, we sell our floors in over 130 countries, but we are the only manufacturer who can proudly say we still make a large proportion of our LVT flooring from scratch, here in the UK.

### A passion for brilliance

We've been setting the standard for creative expression in floor design for a long time. And we've become pretty good at it. The formula is simple. We combine relentless dedication with top-of-class expertise. Then we add that to every single floor we make. Our people stop at nothing to ensure every one of our products delivers what's required of it – excellence.



And if you need something completely unique, our in-house design team are ready to provide advice on product choice, laying patterns and finishes. Plus, we have a team of CAD experts who will work with you to draw up your design ready for manufacture.

**Where we stand on sustainability**

When you choose an Amtico floor, we want you to be sure it's built on foundations that protect our planet and empower our people.

So, we are working on our strategy – a plan for tackling the major challenges, not in the next 20 years, but right now.

To read more about our strategy on sustainability, please visit <https://www.amtico.com/commercial/sustainability/>.



## References

BSI. Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products. BS EN 15804:2012+A2:2019. London, BSI, 2019.

BSI. Environmental labels and declarations – Type III Environmental declarations – Principles and procedures. BS EN ISO 14025:2010 (exactly identical to ISO 14025:2006). London, BSI, 2010.

BSI. Environmental management – Life cycle assessment – Principles and framework. BS EN ISO 14040:2006. London, BSI, 2006.

BSI. Environmental management – Life cycle assessment – requirements and guidelines. BS EN ISO 14044:2006. London, BSI, 2006.

BS EN ISO 10582:2018 Resilient floor coverings. Heterogeneous poly(vinyl chloride) floor covering. Specifications.

BS EN ISO 10874:2012+A1:2020 Resilient, textile and laminate floor coverings. Classification.

BS EN ISO 24340:2012 Resilient floor Coverings. Determination of thickness of layers

BS EN ISO 24346:2012 Resilient floor coverings. Determination of overall thickness.

BS EN ISO 23997:2012 Resilient floor coverings. Determination of mass per unit area.

BS EN 13501-1:2018 Fire classification of construction products and building elements. Classification using data from reaction to fire tests.

BS EN 13893:2002 Resilient, laminate and textile floor coverings. Measurement of dynamic coefficient of friction on dry floor surfaces.

BS EN 1815:2016 Resilient and laminate floor coverings. Assessment of static electrical propensity.

BS EN 12664:2001 Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. Dry and moist products of medium and low thermal resistance

BS 8203:2017 Code of practice for installation of resilient floor coverings