Statement of Verification

BREG EN EPD No: 000754 Issue: 01

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

Komfort Partitioning Limited

are in accordance with the requirements of:

EN 15804:2012+A2:2019

and

BRE Global Scheme Document SD207

This declaration is for:
1 m^2 of Komfort Sonik Double and Single Glazed door

Company Address

Komfort Partitioning Limited,
Unit 501, Bentley Road South,
Wednesbury,
West Midlands,
WS10 8LQ

Sonik 52

Sonik 70

Sonik 70R

komfort

Signed for BRE Global Limited

Hayley Thomson
Operator

06 January 2026	06 January 2026	05 January 2031
Date of this Issue	Date of First Issue	Expiry Date

BRE Global Verified EPD

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ECO PLATFORM EPD VERIFIED

Environmental Product Declaration

EPD Number: 000754

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**
Komfort Partitioning Limited, Unit 501, Bentley Road South, Wednesbury, West Midlands, WS10 8LQ	Bala Subramanian/BRE LINA A2
Declared/Functional Unit	**Applicability/Coverage**
1 m^2 of Komfort Sonik Double and Single Glazed door	Other (please specify). Product specific
EPD Type	**Background database**
Cradle to Gate with options	Ecoinvent 3.8

Demonstration of Verification
CEN standard EN 15804 serves as the core PCR [a]
Independent verification of the declaration and data according to EN ISO 14025:2010 ☒Internal ☐ External
(Where appropriate [b]) Third party verifier: Jiacheng (Francis) Yu
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
					Related to the building fabric					Related to the building							
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
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
☑	☑	☑	☑	☑	☐	☐	☐	☐	☐	☐	☐	☑	☑	☑	☑		☑

Note: Ticks indicate the Information Modules declared.

Manufacturing site(s)

Komfort Partitioning Limited,
Unit 501, Bentley Road South,
Wednesbury,
West Midlands,
WS10 8LQ

Construction Product:

Product Description

Sonik is Komfort's acoustic glazed door which can be integrated within all Komfort's partitioning systems. Designed for ease of installation and future product maintenance, this system also ensures high acoustic insulation is maintained through the use of an automatic drop-down seal. The manufactured door set can be specified as a single, hospital or double door set with either lift-off hinges or with an offset pivot and floor spring.

The system is available in three types of Sonik doors: 52 Double Glazed, 70 Double and Single Glazed, and 70R Double and Single Glazed. The system can be delivered based on the customer's requirements. Since the composition of the product and the manufacturing process is same across the product range therefore the LCA analysis has been conducted for individual product, and the individual result has been included in the analysis.

Sonik door variant	Size and glass	Weight per m^2
Komfort Sonik 52 Double Glazed Door	1,230 mm (W) × 2,180 mm (H) Sonik 52 double-glazed door with 6 mm + 6 mm toughened glass.	21.45
Komfort Sonik 70 Double Glazed Door	1,230mm (W) x 2,180mm (H) with a Sonik 70 double glazed door with 6.8mm + 8.8mm laminate glass.	47.89
Komfort Sonik 70 Single Glazed Door	1,230mm (W) x 2,180mm (H) with a Sonik 70 single glazed door with 12.8mm laminate glass	39.86
Komfort Sonik 70R Double Glazed Door	1,230mm (W) x 2,180mm (H) with a Sonik 70R double glazed door with 6.8 + 8.8mm laminate glass.	47.97
Komfort Sonik 70R Single Glazed Door	1,230mm (W) x 2,180mm (H) with a Sonik 70R single glazed door with12.8mm laminate glass.	40.17

Technical Information

Property	Value, Unit
Maximum Doorset Height	3000mm*
Maximum Door Width	1100mm*
Maximum Door Weight	120kg
Sonik 52 Dimensions	52x44mm
Sonik 70 Dimensions	70x44mm
Sonik 70R Dimensions	70x54mm
Acoustic Performance	Up to 42dB (Rw)*
Fire Performance	None

* Depending on configuration & specification
Note: Please contact Komfort technical team for more information or visit https://www.komfort.com/wp-content/uploads/2020/06/Sonik-Doors-Quick-Sheet.pdf

Sonik 52 Sonik 70 Sonik 70R

Main Product Contents

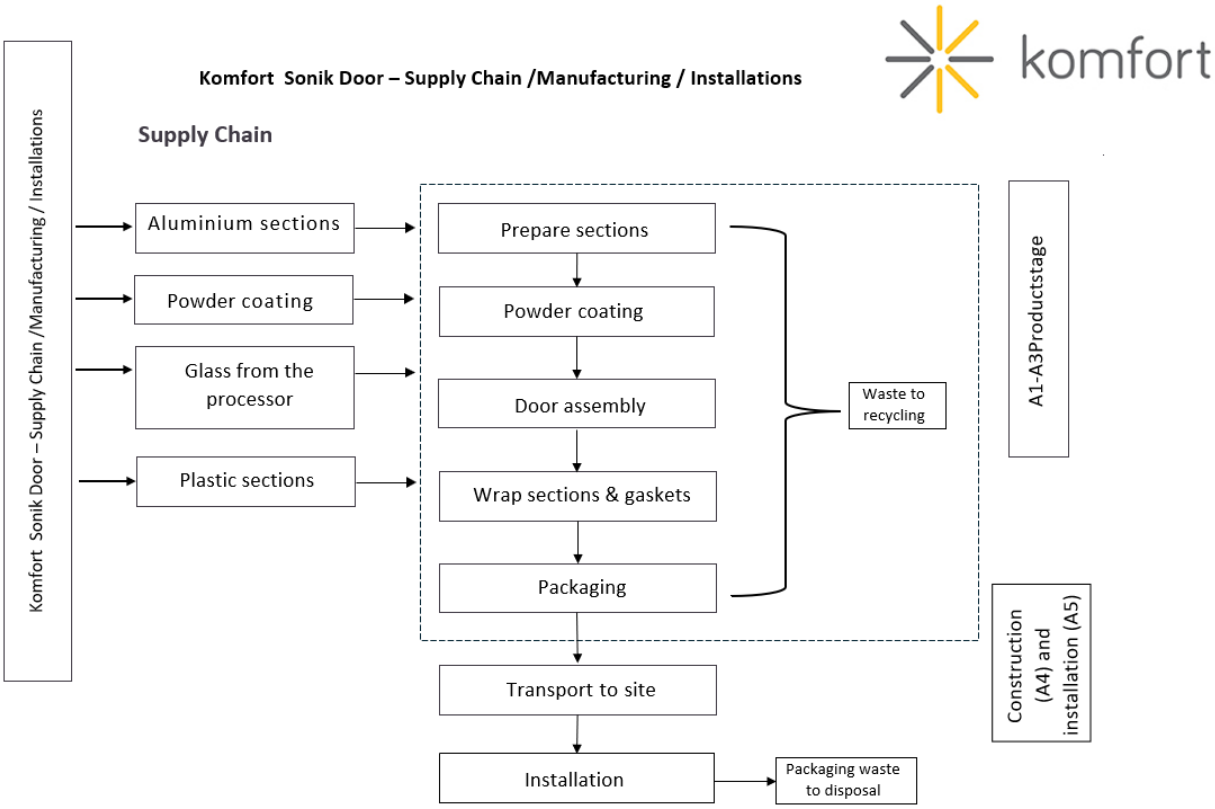
Material Input (%)	Sonik 52	Sonik 70 DG	Sonik 70 SG	Sonik 70R DG	Sonik 70R SG
Aluminium	24	34	34	34	34
Glass	71	61	61	61	61
Gaskets	5	5	5	5	5

Manufacturing Process

All Sonik door types are manufactured to project specific sizes, both height and width. All the components required for the manufacturer of the door are delivered to the Komfort site at Wednesbury, glass panels, aluminium and plastic sections.

The aluminium sections/lengths are powder coated, then they are cut to length and machined for the ironmongery. The glass is ordered to the specific size of the individual door direct from the glass processor. The doors are then assembled in the factory before being wrapped/protected and sent to site. The doors are stacked onto timber or steel reusable stillages which once the doors are delivered return with the lorry back to the factory. All the wastages from A1-A3 product stage will be recycled

Process flow diagram



Construction Installation

Doorframes/doors are installed in to prepared opening on site.

As the product is made bespoke and the door pre-assembled in the factory to fit the aperture, no wastage occurs on site.

End of Life

At the end of lifecycle, the Komfort Sonik doors are disassembled by using the hand tools. Once they are removed, the waste product will be transported for final disposal or recycling, ensuring compliance with environmental regulations.

It's assumed as 100% of the product recovered at its end of life

Life Cycle Assessment Calculation Rules

Declared unit description

1 m^2 of Komfort Sonik Double and single Glazed door

Note: The LCA is calculated on the basis of a 1.23m x 2.18m door.

System boundary

This is a Cradle-to-Gate with Options EPD, reporting the production stages A1 to A3, construction stages A4-A5, and end-of-life stages C1-C4 and D in accordance with EN 15804:2012+A2:2019 and BRE 2025 Product Category Rules (PN 514 Rev 3.2).

Data sources, quality and allocation

The datasets are derived from Ecoinvent v3.8, and the LCA tool used was BRE LINA A2. The LCA analysis was conducted for 1 m^2 of Komfort Sonik single- and double-glazed door. The LCA analysis has been conducted for the following products: 52 Double Glazed, 70 Double and Single Glazed, and 70R Double and Single Glazed. The individual product results are included in the analysis, since they share the same production process and composition. The total production quantity of each door manufactured during the production period from 01/01/2024 to 31/12/2024 was used for the modelling. This includes the total amounts of aluminium, glass, and ancillary materials used in the manufacture of these products. All three products were manufactured at 20.9% of total production. In addition to the Komfort Sonik Double and Single Glazed doors, other products are also manufactured at the Komfort production facility. Therefore, the allocation of electricity, fuel, waste, water consumption, and discharge was required. This allocation was carried out in accordance with the provisions of BRE PCR PN514 and EN 15804, based on mass production quantities. Site-wide values for energy, water, and wastewater were obtained from utility bills. Figures for raw materials and packaging were based on actual usage, and it was noted that the mass balance is within acceptable limits.

ISO14044 guidance. 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 approximately less than 3 years between the Ecoinvent LCI reference year, and the time period for which the LCA was undertaken.

Note: The above data quality exercise has been referenced from EN 15804+A2, Table E.1 – Data quality level and Criteria of the UN Environment Global Guidance on LCA data base development.

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 3.8 database. All ecoinvent 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 EN 15804:2012+A2:2019. Specific UK and European datasets have been selected from the ecoinvent LCI for this LCA. Manufacturer uses the national grid electricity and natural gas for production, so therefore the location-based approach has been used for the LCA modelling (Ecoinvent 3.8). The reference year for the electricity and Natural gas dataset is 2022. The GWP carbon footprint for using 1 kWh of UK electricity, consumption mix is 0.239 kgCO2e/kWh and for using 1 kWh of UK natural gas, at industrial furnace is 0.232 kgCO2eq. The quality level of time representativeness is also Very Good as the background LCI datasets are based on ecoinvent v3.8 which was compiled in 2021. Therefore, there is less than 5 years between the ecoinvent LCI reference year and the time period for which the LCA was undertaken.

Cut-off criteria

All raw materials and energy input to the manufacturing process have been included, except for direct emissions to air, water, and soil, which are not measured. The inventory process in this LCA includes all data

related to raw material, packaging material and consumable items. The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

LCA Results – 1m² Komfort Sonik 52 Double Glazed Door with the weight of 21.45 kg/m²

(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_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	5.78E+01	5.74E+01	2.47E-01	1.06E-01	4.14E-06	4.24E-01	1.83E-02
	Transport	A2	6.63E-01	6.62E-01	4.93E-05	4.43E-04	1.35E-07	1.76E-02	2.74E-05
	Manufacturing	A3	8.02E+00	7.13E+00	8.88E-01	2.63E-03	6.09E-07	1.19E-02	6.19E-04
	Total (Consumption grid)	A1-3	6.65E+01	6.52E+01	1.14E+00	1.09E-01	4.89E-06	4.54E-01	1.89E-02
Construction process stage	Transport	A4	1.43E+00	1.43E+00	1.22E-03	5.60E-04	3.30E-07	5.79E-03	9.19E-05
	Construction	A5	3.70E-01	3.67E-01	2.13E-03	3.16E-04	1.67E-08	1.83E-03	1.10E-04
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	1.78E-01	1.78E-01	1.52E-04	7.00E-05	4.13E-08	7.24E-04	1.15E-05
	Waste processing	C3	1.47E+00	1.45E+00	8.70E-03	1.98E-03	9.94E-08	6.27E-03	3.82E-04
	Disposal	C4	6.73E-02	6.66E-02	6.16E-04	6.40E-05	2.03E-08	5.75E-04	9.00E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.05E+02	-1.05E+02	3.38E-02	-1.34E-01	-4.38E-06	-6.82E-01	-3.21E-02

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 &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	7.00E-02	7.69E-01	2.22E-01	6.95E-04	6.93E+02	1.98E+01	7.82E-06
	Transport	A2	4.35E-03	4.83E-02	1.26E-02	1.21E-06	8.79E+00	2.63E-02	2.97E-08
	Manufacturing	A3	3.16E-03	3.27E-02	1.42E-02	1.99E-05	1.53E+02	3.14E+00	9.60E-08
	Total (Consumption grid)	A1-3	7.75E-02	8.50E-01	2.49E-01	7.16E-04	8.55E+02	2.30E+01	7.95E-06
Construction process stage	Transport	A4	1.74E-03	1.90E-02	5.83E-03	4.96E-06	2.16E+01	9.70E-02	1.23E-07
	Construction	A5	1.09E-03	3.51E-03	1.13E-03	8.43E-06	3.63E+00	1.12E-01	2.59E-08
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	2.18E-04	2.38E-03	7.29E-04	6.20E-07	2.69E+00	1.21E-02	1.54E-08
	Waste processing	C3	1.15E-03	1.26E-02	3.59E-03	5.94E-05	1.12E+01	2.53E-01	9.87E-08
	Disposal	C4	1.96E-04	2.14E-03	6.18E-04	2.07E-07	1.55E+00	7.01E-02	1.17E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.20E-01	-1.26E+00	-3.57E-01	-4.08E-04	-1.17E+03	-1.82E+01	-7.96E-06

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^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	4.56E+00	1.44E+03	8.42E-08	1.07E-06	1.83E+02
	Transport	A2	4.06E-02	5.88E+00	3.71E-10	4.46E-09	2.76E+00
	Manufacturing	A3	1.35E+00	3.87E+01	3.62E-09	2.82E-08	1.80E+01
	Total (Consumption grid)	A1-3	5.95E+00	1.48E+03	8.82E-08	1.11E-06	2.03E+02
Construction process stage	Transport	A4	1.11E-01	1.68E+01	5.45E-10	1.76E-08	1.48E+01
	Construction	A5	2.37E-02	9.92E+00	6.90E-09	7.84E-09	1.98E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.39E-02	2.10E+00	6.81E-11	2.21E-09	1.85E+00
	Waste processing	C3	1.04E-01	3.10E+01	9.62E-10	3.95E-08	1.06E+01
	Disposal	C4	6.95E-03	1.56E+02	5.03E-11	8.04E-10	3.76E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-9.58E+00	-2.37E+03	-1.06E-07	-3.07E-06	-2.54E+02

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	6.12E+01	0.00E+00	6.12E+01	6.56E+02	3.11E+01	6.87E+02
	Transport	A2	6.45E-02	0.00E+00	6.45E-02	8.03E+00	0.00E+00	8.03E+00
	Manufacturing	A3	1.10E-01	9.38E+00	9.49E+00	1.45E+02	2.25E+01	1.68E+02
	Total (Consumption grid)	A1-3	6.14E+01	9.38E+00	7.08E+01	8.10E+02	5.36E+01	8.63E+02
Construction process stage	Transport	A4	3.04E-01	0.00E+00	3.04E-01	2.12E+01	0.00E+00	2.12E+01
	Construction	A5	7.87E-01	0.00E+00	7.87E-01	-1.07E+01	1.43E+01	3.60E+00
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	3.80E-02	0.00E+00	3.80E-02	2.65E+00	0.00E+00	2.65E+00
	Waste processing	C3	9.57E-01	0.00E+00	9.57E-01	7.11E+00	0.00E+00	7.11E+00
	Disposal	C4	2.55E-02	0.00E+00	2.55E-02	1.52E+00	0.00E+00	1.52E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-7.68E+01	0.00E+00	-7.68E+01	-1.06E+03	0.00E+00	-1.06E+03

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^3
Product stage	Raw material supply	A1	1.40E+00	0.00E+00	0.00E+00	4.91E-01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	6.49E-04
	Manufacturing	A3	1.96E-02	3.01E-05	0.00E+00	7.95E-02
	Total (Consumption grid)	A1-3	1.42E+00	3.01E-05	0.00E+00	5.72E-01
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	2.40E-03
	Construction	A5	3.44E-02	0.00E+00	0.00E+00	3.31E-03
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	3.00E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	6.22E-03
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	1.64E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-4.72E-01

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	7.29E+00	8.09E+01	2.14E-03
	Transport	A2	1.05E-02	1.01E-01	8.00E+00
	Manufacturing	A3	2.10E-01	3.42E+00	5.77E-04
	Total (Consumption grid)	A1-3	7.51E+00	8.45E+01	8.01E+00
Construction process stage	Transport	A4	2.38E-02	4.22E-01	1.46E-04
	Construction	A5	2.94E-01	9.60E-01	3.29E-01
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.97E-03	5.28E-02	1.82E-05
	Waste processing	C3	1.03E-01	2.65E+00	2.97E-05
	Disposal	C4	6.06E-03	4.79E-01	9.27E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.65E+01	-1.30E+02	4.24E-04

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	8.87E-03	1.66E-05	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	2.28E-01	4.08E-07	2.80E-02	5.23E-02	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	2.37E-01	1.70E-05	2.80E-02	5.23E-02	0.00E+00
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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	0.00E+00	0.00E+00	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	-1.58E-03	-9.61E-06	-1.61E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

LCA Results – 1 m^2 of Komfort Sonik 70 Single Glazed Door with the weight of 39.86kg/m^2

(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_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	1.34E+02	1.33E+02	5.02E-01	2.66E-01	8.68E-06	9.36E-01	4.52E-02
	Transport	A2	1.68E+00	1.68E+00	9.53E-05	1.13E-03	3.43E-07	4.58E-02	6.71E-05
	Manufacturing	A3	1.50E+01	1.33E+01	1.65E+00	5.06E-03	1.00E-06	2.15E-02	1.15E-03
	Total (Consumption grid)	A1-3	1.51E+02	1.48E+02	2.15E+00	2.72E-01	1.00E-05	1.00E+00	4.64E-02
Construction process stage	Transport	A4	2.65E+00	2.65E+00	2.26E-03	1.04E-03	6.13E-07	1.08E-02	1.71E-04
	Construction	A5	4.21E-01	4.19E-01	2.17E-03	3.21E-04	1.80E-08	1.87E-03	1.10E-04
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	3.32E-01	3.31E-01	2.82E-04	1.30E-04	7.67E-08	1.34E-03	2.13E-05
	Waste processing	C3	-2.98E+00	-3.01E+00	2.15E-02	4.89E-03	2.30E-07	1.48E-02	9.60E-04
	Disposal	C4	1.19E-01	1.18E-01	1.09E-03	1.14E-04	3.39E-08	9.96E-04	1.75E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.48E+02	-2.48E+02	2.76E-01	-3.21E-01	-9.46E-06	-1.60E+00	-7.49E-02

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 &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	1.56E-01	1.68E+00	4.97E-01	1.65E-03	1.59E+03	4.62E+01	1.87E-05
	Transport	A2	1.13E-02	1.26E-01	3.28E-02	2.90E-06	2.22E+01	6.47E-02	7.39E-08
	Manufacturing	A3	5.84E-03	6.06E-02	2.24E-02	4.21E-05	2.79E+02	5.89E+00	1.81E-07
	Total (Consumption grid)	A1-3	1.73E-01	1.87E+00	5.53E-01	1.70E-03	1.89E+03	5.22E+01	1.89E-05
Construction process stage	Transport	A4	3.24E-03	3.54E-02	1.08E-02	9.21E-06	4.01E+01	1.80E-01	2.29E-07
	Construction	A5	1.85E-03	3.65E-03	1.18E-03	8.45E-06	3.74E+00	1.17E-01	2.67E-08
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	4.05E-04	4.43E-03	1.36E-03	1.15E-06	5.01E+00	2.25E-02	2.86E-08
	Waste processing	C3	2.46E-03	2.71E-02	7.89E-03	1.52E-04	2.71E+01	2.57E-01	2.43E-07
	Disposal	C4	3.34E-04	3.64E-03	1.05E-03	3.57E-07	2.65E+00	1.18E-01	1.99E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.77E-01	-2.90E+00	-8.25E-01	-7.29E-04	-2.63E+03	-3.89E+01	-1.92E-05

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^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.07E+01	3.41E+03	2.15E-07	2.67E-06	4.00E+02
	Transport	A2	1.02E-01	1.47E+01	9.46E-10	1.10E-08	6.80E+00
	Manufacturing	A3	2.48E+00	6.83E+01	3.35E-09	5.36E-08	3.37E+01
	Total (Consumption grid)	A1-3	1.33E+01	3.50E+03	2.19E-07	2.74E-06	4.40E+02
Construction process stage	Transport	A4	2.06E-01	3.13E+01	1.01E-09	3.28E-08	2.75E+01
	Construction	A5	2.42E-02	1.01E+01	6.91E-09	7.93E-09	2.23E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.57E-02	3.91E+00	1.27E-10	4.10E-09	3.44E+00
	Waste processing	C3	2.58E-01	6.80E+01	2.37E-09	9.65E-08	2.56E+01
	Disposal	C4	1.21E-02	4.04E+02	9.04E-11	1.54E-09	6.27E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.84E+01	-5.81E+03	-2.50E-07	-6.65E-06	-5.73E+02

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	1.49E+02	0.00E+00	1.49E+02	1.51E+03	6.40E+01	1.58E+03
	Transport	A2	1.65E-01	0.00E+00	1.65E-01	2.08E+01	0.00E+00	2.08E+01
	Manufacturing	A3	-2.12E-02	1.74E+01	1.74E+01	2.69E+02	3.71E+01	3.06E+02
	Total (Consumption grid)	A1-3	1.49E+02	1.74E+01	1.67E+02	1.80E+03	1.01E+02	1.90E+03
Construction process stage	Transport	A4	5.64E-01	0.00E+00	5.64E-01	3.93E+01	0.00E+00	3.93E+01
	Construction	A5	7.89E-01	0.00E+00	7.89E-01	-2.44E+01	2.82E+01	3.71E+00
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	7.06E-02	0.00E+00	7.06E-02	4.92E+00	0.00E+00	4.92E+00
	Waste processing	C3	2.45E+00	0.00E+00	2.45E+00	-3.95E+01	5.78E+01	1.83E+01
	Disposal	C4	5.02E-02	0.00E+00	5.02E-02	2.61E+00	0.00E+00	2.61E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.69E+02	0.00E+00	-1.69E+02	-2.41E+03	0.00E+00	-2.41E+03

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^3
Product stage	Raw material supply	A1	3.65E+00	0.00E+00	0.00E+00	1.15E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	1.60E-03
	Manufacturing	A3	1.64E-02	5.59E-05	0.00E+00	1.49E-01
	Total (Consumption grid)	A1-3	3.67E+00	5.59E-05	0.00E+00	1.30E+00
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	4.47E-03
	Construction	A5	3.44E-02	0.00E+00	0.00E+00	3.42E-03
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	5.58E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	6.82E-03
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	2.77E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-1.02E+00

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	1.87E+01	1.99E+02	4.75E-03
	Transport	A2	2.73E-02	2.58E-01	2.10E+01
	Manufacturing	A3	2.60E-01	6.48E+00	1.01E-03
	Total (Consumption grid)	A1-3	1.90E+01	2.06E+02	2.10E+01
Construction process stage	Transport	A4	4.42E-02	7.84E-01	2.71E-04
	Construction	A5	2.94E-01	1.38E+00	3.29E-01
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.52E-03	9.81E-02	3.39E-05
	Waste processing	C3	4.01E-01	8.64E+00	7.44E-05
	Disposal	C4	1.36E-02	1.11E+00	1.56E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.15E+01	-3.02E+02	4.20E-04

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	2.32E-02	4.34E-05	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	4.23E-01	7.57E-07	5.20E-02	9.72E-02	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	4.47E-01	4.42E-05	5.20E-02	9.72E-02	0.00E+00
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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	0.00E+00	0.00E+00	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	-2.54E-03	-1.55E-05	-2.57E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

LCA Results – 1 m^2 of Komfort Sonik 70 Double Glazed Door with the weight of 47.89 kg/m^2

(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_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	1.61E+02	1.60E+02	6.03E-01	3.20E-01	1.04E-05	1.13E+00	5.43E-02
	Transport	A2	2.02E+00	2.02E+00	1.15E-04	1.36E-03	4.12E-07	5.50E-02	8.06E-05
	Manufacturing	A3	1.80E+01	1.60E+01	1.98E+00	6.08E-03	1.20E-06	2.59E-02	1.39E-03
	Total (Consumption grid)	A1-3	1.81E+02	1.78E+02	2.58E+00	3.27E-01	1.20E-05	1.21E+00	5.57E-02
Construction process stage	Transport	A4	3.19E+00	3.18E+00	2.71E-03	1.25E-03	7.37E-07	1.29E-02	2.05E-04
	Construction	A5	4.44E-01	4.41E-01	2.18E-03	3.23E-04	1.86E-08	1.88E-03	1.11E-04
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	3.98E-01	3.98E-01	3.39E-04	1.56E-04	9.21E-08	1.62E-03	2.56E-05
	Waste processing	C3	-3.57E+00	-3.61E+00	2.58E-02	5.87E-03	2.76E-07	1.78E-02	1.15E-03
	Disposal	C4	1.43E-01	1.41E-01	1.30E-03	1.37E-04	4.07E-08	1.20E-03	2.11E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.98E+02	-2.98E+02	3.32E-01	-3.86E-01	-1.14E-05	-1.92E+00	-9.00E-02

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 &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	1.87E-01	2.02E+00	5.97E-01	1.99E-03	1.91E+03	5.56E+01	2.25E-05
	Transport	A2	1.36E-02	1.51E-01	3.95E-02	3.49E-06	2.67E+01	7.77E-02	8.88E-08
	Manufacturing	A3	7.02E-03	7.28E-02	2.69E-02	5.06E-05	3.35E+02	7.08E+00	2.17E-07
	Total (Consumption grid)	A1-3	2.08E-01	2.25E+00	6.64E-01	2.04E-03	2.27E+03	6.27E+01	2.28E-05
Construction process stage	Transport	A4	3.89E-03	4.25E-02	1.30E-02	1.11E-05	4.81E+01	2.17E-01	2.75E-07
	Construction	A5	2.17E-03	3.71E-03	1.20E-03	8.45E-06	3.79E+00	1.19E-01	2.70E-08
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	4.87E-04	5.32E-03	1.63E-03	1.38E-06	6.02E+00	2.71E-02	3.43E-08
	Waste processing	C3	2.96E-03	3.25E-02	9.48E-03	1.83E-04	3.25E+01	3.09E-01	2.92E-07
	Disposal	C4	4.01E-04	4.37E-03	1.26E-03	4.28E-07	3.18E+00	1.42E-01	2.39E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.33E-01	-3.49E+00	-9.91E-01	-8.76E-04	-3.16E+03	-4.67E+01	-2.31E-05

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^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.29E+01	4.10E+03	2.58E-07	3.21E-06	4.81E+02
	Transport	A2	1.23E-01	1.76E+01	1.14E-09	1.32E-08	8.17E+00
	Manufacturing	A3	2.98E+00	8.21E+01	4.03E-09	6.44E-08	4.05E+01
	Total (Consumption grid)	A1-3	1.60E+01	4.20E+03	2.64E-07	3.29E-06	5.29E+02
Construction process stage	Transport	A4	2.47E-01	3.76E+01	1.22E-09	3.94E-08	3.31E+01
	Construction	A5	2.44E-02	1.02E+01	6.91E-09	7.97E-09	2.33E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.09E-02	4.70E+00	1.52E-10	4.92E-09	4.13E+00
	Waste processing	C3	3.11E-01	8.18E+01	2.85E-09	1.16E-07	3.07E+01
	Disposal	C4	1.45E-02	4.85E+02	1.09E-10	1.85E-09	7.53E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.21E+01	-6.98E+03	-3.00E-07	-7.99E-06	-6.88E+02

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	1.79E+02	0.00E+00	1.79E+02	1.82E+03	7.69E+01	1.89E+03
	Transport	A2	1.98E-01	0.00E+00	1.98E-01	2.49E+01	0.00E+00	2.49E+01
	Manufacturing	A3	-2.57E-02	2.09E+01	2.09E+01	3.23E+02	4.46E+01	3.67E+02
	Total (Consumption grid)	A1-3	1.79E+02	2.09E+01	2.00E+02	2.16E+03	1.21E+02	2.29E+03
Construction process stage	Transport	A4	6.78E-01	0.00E+00	6.78E-01	4.73E+01	0.00E+00	4.73E+01
	Construction	A5	7.90E-01	0.00E+00	7.90E-01	-3.04E+01	3.42E+01	3.76E+00
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	8.48E-02	0.00E+00	8.48E-02	5.91E+00	0.00E+00	5.91E+00
	Waste processing	C3	2.94E+00	0.00E+00	2.94E+00	-4.73E+01	6.93E+01	2.20E+01
	Disposal	C4	6.03E-02	0.00E+00	6.03E-02	3.13E+00	0.00E+00	3.13E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.03E+02	0.00E+00	-2.03E+02	-2.90E+03	0.00E+00	-2.90E+03

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^3
Product stage	Raw material supply	A1	4.38E+00	0.00E+00	0.00E+00	1.38E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	1.92E-03
	Manufacturing	A3	1.97E-02	6.72E-05	0.00E+00	1.79E-01
	Total (Consumption grid)	A1-3	4.40E+00	6.72E-05	0.00E+00	1.57E+00
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	5.37E-03
	Construction	A5	3.44E-02	0.00E+00	0.00E+00	3.47E-03
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	6.71E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	8.21E-03
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	3.32E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-1.22E+00

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	2.24E+01	2.39E+02	5.71E-03
	Transport	A2	3.28E-02	3.10E-01	2.52E+01
	Manufacturing	A3	3.13E-01	7.79E+00	1.22E-03
	Total (Consumption grid)	A1-3	2.28E+01	2.47E+02	2.52E+01
Construction process stage	Transport	A4	5.31E-02	9.42E-01	3.26E-04
	Construction	A5	2.94E-01	1.57E+00	3.29E-01
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	6.63E-03	1.18E-01	4.07E-05
	Waste processing	C3	4.81E-01	1.04E+01	8.94E-05
	Disposal	C4	1.63E-02	1.33E+00	1.87E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.99E+01	-3.63E+02	4.92E-04

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	2.79E-02	5.21E-05	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	5.09E-01	9.10E-07	6.25E-02	1.17E-01	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	5.37E-01	5.30E-05	6.25E-02	1.17E-01	0.00E+00
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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	0.00E+00	0.00E+00	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	-3.06E-03	-1.86E-05	-3.10E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

LCA Results – 1 m^2 of Komfort Sonik 70R Single Glazed Door with the weight of 40.17 kg/m^2

(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_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	1.36E+02	1.35E+02	5.08E-01	2.70E-01	8.74E-06	9.48E-01	4.58E-02
	Transport	A2	1.71E+00	1.71E+00	9.62E-05	1.15E-03	3.49E-07	4.66E-02	6.82E-05
	Manufacturing	A3	1.49E+01	1.33E+01	1.66E+00	4.86E-03	1.02E-06	2.11E-02	1.12E-03
	Total (Consumption grid)	A1-3	1.53E+02	1.50E+02	2.17E+00	2.76E-01	1.01E-05	1.02E+00	4.70E-02
Construction process stage	Transport	A4	2.67E+00	2.67E+00	2.28E-03	1.05E-03	6.18E-07	1.08E-02	1.72E-04
	Construction	A5	4.20E-01	4.18E-01	2.17E-03	3.21E-04	1.80E-08	1.87E-03	1.10E-04
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	3.34E-01	3.34E-01	2.85E-04	1.31E-04	7.73E-08	1.36E-03	2.15E-05
	Waste processing	C3	-2.81E+00	-2.84E+00	2.19E-02	4.97E-03	2.34E-07	1.51E-02	9.77E-04
	Disposal	C4	1.20E-01	1.18E-01	1.09E-03	1.15E-04	3.41E-08	1.00E-03	1.77E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.52E+02	-2.52E+02	2.85E-01	-3.26E-01	-9.56E-06	-1.62E+00	-7.60E-02

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 &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	1.58E-01	1.71E+00	5.03E-01	1.68E-03	1.61E+03	4.67E+01	1.90E-05
	Transport	A2	1.15E-02	1.28E-01	3.34E-02	2.95E-06	2.26E+01	6.57E-02	7.51E-08
	Manufacturing	A3	5.77E-03	5.97E-02	2.29E-02	3.53E-05	2.80E+02	5.88E+00	1.71E-07
	Total (Consumption grid)	A1-3	1.75E-01	1.89E+00	5.60E-01	1.71E-03	1.91E+03	5.27E+01	1.92E-05
Construction process stage	Transport	A4	3.26E-03	3.57E-02	1.09E-02	9.29E-06	4.04E+01	1.82E-01	2.30E-07
	Construction	A5	1.83E-03	3.65E-03	1.18E-03	8.45E-06	3.74E+00	1.17E-01	2.67E-08
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	4.08E-04	4.46E-03	1.37E-03	1.16E-06	5.05E+00	2.27E-02	2.88E-08
	Waste processing	C3	2.52E-03	2.76E-02	8.05E-03	1.55E-04	2.76E+01	2.74E-01	2.47E-07
	Disposal	C4	3.36E-04	3.66E-03	1.06E-03	3.59E-07	2.67E+00	1.18E-01	2.00E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.81E-01	-2.94E+00	-8.37E-01	-7.35E-04	-2.66E+03	-3.93E+01	-1.95E-05

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^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.08E+01	3.46E+03	2.19E-07	2.71E-06	4.04E+02
	Transport	A2	1.04E-01	1.49E+01	9.62E-10	1.12E-08	6.91E+00
	Manufacturing	A3	2.49E+00	6.62E+01	3.92E-09	4.96E-08	3.28E+01
	Total (Consumption grid)	A1-3	1.34E+01	3.54E+03	2.23E-07	2.77E-06	4.44E+02
Construction process stage	Transport	A4	2.08E-01	3.15E+01	1.02E-09	3.30E-08	2.77E+01
	Construction	A5	2.42E-02	1.01E+01	6.91E-09	7.93E-09	2.22E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.59E-02	3.94E+00	1.28E-10	4.13E-09	3.47E+00
	Waste processing	C3	2.63E-01	6.96E+01	2.42E-09	9.83E-08	2.60E+01
	Disposal	C4	1.21E-02	4.11E+02	9.11E-11	1.55E-09	6.31E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.83E+01	-5.90E+03	-2.53E-07	-6.73E-06	-5.78E+02

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	1.51E+02	0.00E+00	1.51E+02	1.53E+03	6.30E+01	1.59E+03
	Transport	A2	1.68E-01	0.00E+00	1.68E-01	2.11E+01	0.00E+00	2.11E+01
	Manufacturing	A3	-9.81E-02	1.76E+01	1.75E+01	2.70E+02	3.79E+01	3.08E+02
	Total (Consumption grid)	A1-3	1.51E+02	1.76E+01	1.69E+02	1.82E+03	1.01E+02	1.92E+03
Construction process stage	Transport	A4	5.69E-01	0.00E+00	5.69E-01	3.96E+01	0.00E+00	3.96E+01
	Construction	A5	7.89E-01	0.00E+00	7.89E-01	-2.41E+01	2.78E+01	3.71E+00
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	7.11E-02	0.00E+00	7.11E-02	4.96E+00	0.00E+00	4.96E+00
	Waste processing	C3	2.49E+00	0.00E+00	2.49E+00	-3.82E+01	5.68E+01	1.86E+01
	Disposal	C4	5.06E-02	0.00E+00	5.06E-02	2.62E+00	0.00E+00	2.62E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.71E+02	0.00E+00	-1.71E+02	-2.45E+03	0.00E+00	-2.45E+03

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^3
Product stage	Raw material supply	A1	3.71E+00	0.00E+00	0.00E+00	1.17E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	1.62E-03
	Manufacturing	A3	2.04E-02	5.63E-05	0.00E+00	1.49E-01
	Total (Consumption grid)	A1-3	3.73E+00	5.63E-05	0.00E+00	1.32E+00
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	4.50E-03
	Construction	A5	3.44E-02	0.00E+00	0.00E+00	3.42E-03
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	5.63E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	7.22E-03
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	2.78E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-1.03E+00

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	1.90E+01	2.02E+02	4.79E-03
	Transport	A2	2.78E-02	2.62E-01	2.13E+01
	Manufacturing	A3	2.76E-01	6.25E+00	1.03E-03
	Total (Consumption grid)	A1-3	1.93E+01	2.08E+02	2.13E+01
Construction process stage	Transport	A4	4.45E-02	7.91E-01	2.73E-04
	Construction	A5	2.94E-01	1.37E+00	3.29E-01
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.56E-03	9.88E-02	3.41E-05
	Waste processing	C3	4.03E-01	8.70E+00	7.55E-05
	Disposal	C4	1.37E-02	1.11E+00	1.56E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.23E+01	-3.07E+02	3.35E-04

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	2.36E-02	4.41E-05	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	4.27E-01	7.63E-07	5.24E-02	9.79E-02	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	4.50E-01	4.49E-05	5.24E-02	9.79E-02	0.00E+00
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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	0.00E+00	0.00E+00	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	-2.56E-03	-1.55E-05	-2.59E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

LCA Results – 1 m^2 of Komfort Sonik 70R Double Glazed Door with the weight of 47.97 kg/m^2

(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_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	1.62E+02	1.61E+02	6.07E-01	3.23E-01	1.04E-05	1.13E+00	5.47E-02
	Transport	A2	2.04E+00	2.04E+00	1.15E-04	1.37E-03	4.16E-07	5.57E-02	8.14E-05
	Manufacturing	A3	1.78E+01	1.58E+01	1.98E+00	5.81E-03	1.22E-06	2.52E-02	1.33E-03
	Total (Consumption grid)	A1-3	1.82E+02	1.79E+02	2.59E+00	3.30E-01	1.21E-05	1.21E+00	5.61E-02
Construction process stage	Transport	A4	3.19E+00	3.19E+00	2.72E-03	1.25E-03	7.38E-07	1.29E-02	2.05E-04
	Construction	A5	4.65E-01	4.62E-01	2.20E-03	3.22E-04	1.85E-08	1.88E-03	1.10E-04
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	3.99E-01	3.99E-01	3.40E-04	1.57E-04	9.23E-08	1.62E-03	2.57E-05
	Waste processing	C3	-3.37E+00	-3.40E+00	2.61E-02	5.93E-03	2.80E-07	1.81E-02	1.17E-03
	Disposal	C4	1.43E-01	1.41E-01	1.30E-03	1.38E-04	4.07E-08	1.20E-03	2.11E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.00E+02	-3.00E+02	3.40E-01	-3.89E-01	-1.14E-05	-1.93E+00	-9.07E-02

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 &metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	1.88E-01	2.04E+00	6.01E-01	2.00E-03	1.92E+03	5.58E+01	2.26E-05
	Transport	A2	1.38E-02	1.53E-01	3.99E-02	3.52E-06	2.70E+01	7.85E-02	8.97E-08
	Manufacturing	A3	6.89E-03	7.13E-02	2.73E-02	4.21E-05	3.35E+02	7.03E+00	2.04E-07
	Total (Consumption grid)	A1-3	2.09E-01	2.26E+00	6.68E-01	2.05E-03	2.28E+03	6.29E+01	2.29E-05
Construction process stage	Transport	A4	3.90E-03	4.26E-02	1.30E-02	1.11E-05	4.82E+01	2.17E-01	2.75E-07
	Construction	A5	7.94E-04	3.70E-03	1.20E-03	8.45E-06	3.78E+00	1.19E-01	2.70E-08
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	4.87E-04	5.33E-03	1.63E-03	1.39E-06	6.03E+00	2.71E-02	3.44E-08
	Waste processing	C3	3.00E-03	3.30E-02	9.61E-03	1.85E-04	3.29E+01	3.26E-01	2.95E-07
	Disposal	C4	4.01E-04	4.37E-03	1.26E-03	4.28E-07	3.18E+00	1.41E-01	2.39E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.35E-01	-3.51E+00	-9.98E-01	-8.77E-04	-3.18E+03	-4.70E+01	-2.33E-05

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^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.29E+01	4.13E+03	2.61E-07	3.24E-06	4.83E+02
	Transport	A2	1.24E-01	1.78E+01	1.15E-09	1.33E-08	8.25E+00
	Manufacturing	A3	2.97E+00	7.90E+01	4.68E-09	5.93E-08	3.92E+01
	Total (Consumption grid)	A1-3	1.60E+01	4.23E+03	2.67E-07	3.31E-06	5.30E+02
Construction process stage	Transport	A4	2.48E-01	3.76E+01	1.22E-09	3.95E-08	3.31E+01
	Construction	A5	2.43E-02	9.98E+00	6.91E-09	7.90E-09	2.31E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.10E-02	4.70E+00	1.52E-10	4.93E-09	4.14E+00
	Waste processing	C3	3.14E-01	8.30E+01	2.89E-09	1.17E-07	3.11E+01
	Disposal	C4	1.45E-02	4.92E+02	1.09E-10	1.85E-09	7.53E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.19E+01	-7.04E+03	-3.02E-07	-8.04E-06	-6.90E+02

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	1.80E+02	0.00E+00	1.80E+02	1.83E+03	7.52E+01	1.90E+03
	Transport	A2	2.00E-01	0.00E+00	2.00E-01	2.52E+01	0.00E+00	2.52E+01
	Manufacturing	A3	-1.17E-01	2.10E+01	2.09E+01	3.23E+02	4.53E+01	3.68E+02
	Total (Consumption grid)	A1-3	1.81E+02	2.10E+01	2.02E+02	2.17E+03	1.21E+02	2.30E+03
Construction process stage	Transport	A4	6.79E-01	0.00E+00	6.79E-01	4.73E+01	0.00E+00	4.73E+01
	Construction	A5	7.89E-01	0.00E+00	7.89E-01	-3.87E+01	4.25E+01	3.74E+00
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	8.49E-02	0.00E+00	8.49E-02	5.92E+00	0.00E+00	5.92E+00
	Waste processing	C3	2.97E+00	0.00E+00	2.97E+00	-4.58E+01	6.80E+01	2.22E+01
	Disposal	C4	6.05E-02	0.00E+00	6.05E-02	3.13E+00	0.00E+00	3.13E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.04E+02	0.00E+00	-2.04E+02	-2.92E+03	0.00E+00	-2.92E+03

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^3
Product stage	Raw material supply	A1	4.43E+00	0.00E+00	0.00E+00	1.39E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	1.94E-03
	Manufacturing	A3	2.43E-02	6.73E-05	0.00E+00	1.78E-01
	Total (Consumption grid)	A1-3	4.46E+00	6.73E-05	0.00E+00	1.57E+00
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	5.37E-03
	Construction	A5	3.44E-02	0.00E+00	0.00E+00	3.46E-03
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	6.72E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	8.61E-03
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	3.32E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-1.23E+00

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	2.27E+01	2.41E+02	5.73E-03
	Transport	A2	3.31E-02	3.13E-01	2.55E+01
	Manufacturing	A3	3.30E-01	7.46E+00	1.23E-03
	Total (Consumption grid)	A1-3	2.30E+01	2.49E+02	2.55E+01
Construction process stage	Transport	A4	5.32E-02	9.44E-01	3.26E-04
	Construction	A5	2.94E-01	1.54E+00	3.29E-01
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	6.64E-03	1.18E-01	4.08E-05
	Waste processing	C3	4.81E-01	1.04E+01	9.01E-05
	Disposal	C4	1.64E-02	1.33E+00	1.87E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.04E+01	-3.67E+02	4.07E-04

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	2.82E-02	5.27E-05	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	5.09E-01	9.11E-07	6.26E-02	1.17E-01	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	5.38E-01	5.36E-05	6.26E-02	1.17E-01	0.00E+00
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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	0.00E+00	0.00E+00	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	-3.05E-03	-1.86E-05	-3.09E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

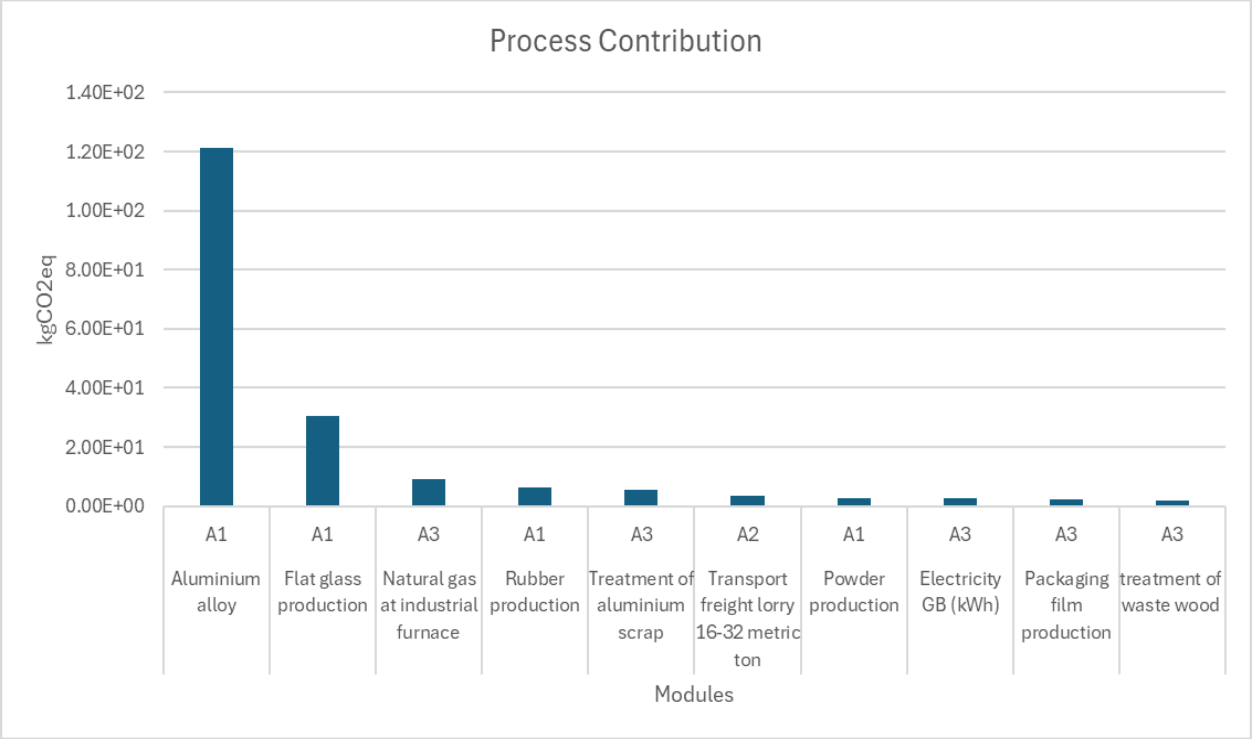
Scenarios and additional technical information

Scenarios and additional technical information						
Scenario	Parameter			Units		Results
A4 – Transport to the building site	Transported from Wallsal to sites across the UK. Based on a worst case of 400km					
	Road transport - Lorry 17.5 metric ton to sites across the UK			km		400
	Capacity utilisation (incl. empty returns)			%		29%
	Fuel consumption			l/km		0.165
	Weight per m^2 of transported products			kg/m^2		30.87
A5 – Installation in the building	Doorframes/doors are installed in to prepared opening on site. As the product is made bespoke and the door pre-assembled in the factory to fit the aperture, no wastage occurs on site. Only the packaging wase during the product installation.					
	Installation waste			%		0
Packaging waste	**Waste**	**Sonik 52 DG**	**Sonik 70 SG**	**Sonik 70 DG**	**Sonik 70R SG**	**Sonik 70R DG**
	Plastic wrap	0.34	0.68	0.82	0.67	0.80
	Recycled foam	0.04	0.08	0.1	0.08	0.09
	Plastic waste	0.05	0.09	0.11	0.09	0.11
C1 – Deconstruction	At the end of lifecycle, the Komfort Sonik doors are disassembled by using the hand tools. Once they are removed, the waste product will be transported for final disposal or recycling, ensuring compliance with environmental regulations. It's assumed as 100% of the product recovered at its end of life.					
C2 - Transportation	50km by road has been modelled for module C2 as a typical distance from the demolition site to the disposal unit. However, end-users of the EPD can use this information to calculate the impacts of a bespoke transport distance for module C2 if required.					
	Road transport – Lorry 16-32 tonne			km		50
C3 – Waste processing	Once the Komfort Sonik Doors reaches the waste processing facility, it will be separated from other waste streams and sent for recycling. The sorting and separation activities are not included in the pre-processing analysis. An industrial average end-of-life data has been used according to BRE 2025 Product Category Rules (PN 514 Rev 3.2). This data indicates that 95% of aluminium waste will be recycled and 61% of glazing will be recycled and 100% of rubber is incinerated for energy recovery.					
	Sonik 52 DG (kg)	**Sonik 70 SG (kg)**		**Sonik 70 DG (kg)**	**Sonik 70R SG (kg)**	**Sonik 70R DG (kg)**
95% of Aluminium waste to recycling	4.81	12.35		14.84	12.56	15.00
61% of Glass waste to recycling	9.24	14.87		17.87	14.95	17.85
100% of Gaskets to incineration	1.053	2.125		2.55	2.09	2.50

Scenarios and additional technical information					
Scenario	Parameter		Units		Results
C4 – Disposal	Unrecovered waste sent to landfill i.e., 5% of aluminium waste to landfill and 39% of glass waste sent to landfill, 100% powder coating waste sent to landfill				
	Sonik 52 DG (kg)	**Sonik 70 SG (kg)**	**Sonik 70 DG (kg)**	**Sonik 70R SG (kg)**	**Sonik 70R DG (kg)**
Aluminium waste – 5% landfill	0.253	0.65	0.78	0.66	0.79
Glass waste – 31% landfill	5.91	9.51	11.42	9.56	11.41
Powder coat waste to landfill	0.18	0.36	0.43	0.35	0.42
Module D	Benefit and load have been calculated for the virgin aluminium, glass, and incineration of waste rubber. In calculating the benefits of recycling steel at the end of life, the pre-existing recycled content has been removed, and the benefits have been calculated for only virgin inputs. Aluminium can be recycled indefinitely without losing its properties, making it a highly sustainable material. The secondary material content in the dataset used for the Aluminium dataset used for the LCA modelling is 25.90% from ecoinvent 3.8. Recycled glass can be used as a replacement for virgin glass fibers, and the secondary material content is negligible for the glass dataset. The waste rubber will be incinerated in the UK, so the UK electricity dataset have been selected. The dataset used to calculate the avoided impacts of electricity consumption in a future system was 'Electricity, medium voltage {GB}| market for | Alloc Def, U'.				
	Sonik 52 DG (kg)	**Sonik 70 SG (kg)**	**Sonik 70 DG (kg)**	**Sonik 70R SG (kg)**	**Sonik 70R DG (kg)**
Products Recycled Content (Aluminium – post consumer – 25.90%)	1.25	3.20	3.84	3.25	3.88
Benefits of recycling virgin aluminium	3.57	9.15	11.00	9.31	11.11
Benefits of recycling virgin glass	9.24	14.87	17.87	14.95	17.85
Benefits due to incineration of rubber	1.05	2.13	2.55	2.09	2.50

Interpretation of results

The bulk of the environmental impacts and primary energy demand are attributed to the manufacturing phase of Komfort Sonik 70 Double Glazed door products, covered by information modules A1-A3 of EN15804:2012+A2:2019. Komfort Sonik 70 Double Glazed Door 6.8+8.8 glass have been taken as a representative to interpret the results. The bar chart illustrates the global warming potential (GWP) contributions of various processes involved in producing Komfort Sonik 70 Double Glazed Door, measured in kg CO_2-equivalent. The highest contributor is Aluminium, and glass production (A1), indicating significant emissions from energy use during manufacturing. This is followed by the Natural gas used for heating (A3), rubber production (A1), and treatment of aluminium waste (A3), highlighting the environmental impact of manufacturing and raw material sourcing. Other processes, such as transportation (A2), coating powder production (A1), and Electricity (A3), contribute comparatively less. Overall, the chart emphasizes that material production is the dominant source of emissions for this product.



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