

Statement of Verification

BREG EN EPD No.: 000632

Issue 01

This is to verify that the

Environmental Product Declaration provided by:

Axis Entrance Systems Limited

is in accordance with the requirements of:

EN 15804:2012+A2:2019

and

BRE Global Scheme Document SD207

This declaration is for:

1 unit Single door F11 (299 kg), 1 unit Single door F12 (299 kg), 1 unit Single door F01 (3400 mm) (291 kg)

Company Address

Axis Entrance Systems Limited Unit 7a Queens Park Industrial Estate Studland Road Northampton NN2 6NA





Signed for BRE Global Ltd

Emma Baker

Operator

19 September 2024

Date of this Issue

19 September 2024

Date of First Issue

18 September 2029

Expiry Date



This Statement of Verification is issued subject to terms and conditions (for details visit www.greenbooklive.com/terms.

To check the validity of this statement of verification please, visit www.greenbooklive.com/check or contact us.

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Environmental Product Declaration

EPD Number: 000632

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE Environmental Profiles 2023 Product Category Rules for Type III environmental product declaration of construction products to EN 15804+A2 PN 514 Rev 3.1
Commissioner of LCA study	LCA consultant/Tool
Axis Entrance Systems Limited	Flavie Lowres/LINA A2
Declared/Functional Unit	Applicability/Coverage
This EPD covers 3 products: 1 unit Single door F11 (299 kg), 1 unit Single door F12 (299 kg), 1 unit Single door F01 (3400 mm) (291 kg)	Product specific.
EPD Type	Background database
Cradle to Gate with Module C and D	Ecoinvent 3.8
Demonstra	ation of Verification
CEN standard EN 1	5804 serves as the core PCR ^a

Independent verification of the declaration and data according to EN ISO 14025:2010 \Box Internal \boxtimes External

(Where appropriate ^b)Third party verifier: Roger Connick

- 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

	Produc	+	Const	ruction		Use stage						End-of-life				Benefits and loads beyond
	rioduc		Const	ruction	Related to the building fabric					Related to End-C e building		na-or-me		the system boundary		
A 1	A2	А3	A4	A 5	B1	B2	В3	B4	B5	В6	В7	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
$\overline{\mathbf{A}}$	$\overline{\mathbf{Q}}$	V										$\overline{\mathbf{A}}$	$\overline{\checkmark}$	$\overline{\mathbf{A}}$	$\overline{\mathbf{Q}}$	$\overline{\checkmark}$

Note: Ticks indicate the Information Modules declared.

Manufacturing site(s)

Axis Entrance Systems Limited Unit 7a Queens Park Industrial Estate Studland Road Northampton NN2 6NA

Construction Product:

Product Description

Flo-Motion® door sets are manual aluminium framed sliding internal glazed door system primarily used within the Healthcare sector. They feature recirculating ball guides on a special low resistance linear track with a damper mechanism. The door sets are fabricated using extruded aluminium profiles and include a 'goalpost' frame.

The aluminium door set is formed from non-thermal aluminium extruded box section and include a frame consisting of two jambs (152mm and 100mm x 45mm profiles) and a 125mm x 100mm transom bar with a 7mm reinforced face. The opening leaf will close onto the "slam post" that forms part of the jamb. The frame to fit within the structural opening (see door schedule for dimensions below) with the door sliding over a glazed screen. The glazed fixed panel screen offers additional support to the frame and is secured within the frame structure by two concealed aluminium channels.

The glass panels are made of laminated glass. The doors modelled in this EPD assume that there is no blind fitted.

Further details of the products covered by this EPD can be found here:

Flo-Motion® F01 (3400 mm) - Manual door system with the door sliding over adjacent glazed screen and wall.

Flo-Motion® F11 - Manual door system with the door sliding over adjacent glazed screen – left hand.

Flo-Motion® F12 - Manual door system with the door sliding over adjacent glazed screen – right hand.



The door schedule is provided below:

Door Type	Width	Height	Total Weight/Door		
Single Door F11	3600 mm	2400 mm	299 kg		
Single Door F12	3600 mm	2400 mm	299 kg		
Single Door F01 (3400 mm)	3400 mm	2400 mm	291 kg		

Ref: <u>axisflomotionbrochure 0.pdf (axisentrances.com)</u> – the weight provided above are for a mid-size door for each range.



Technical Information

A typical Flo-Motion® entrance door set (representative of the whole Flo-Motion® door set range) has been independently tested to BS- EN1527:2019 - Digit 9 - Durability Grade 6 for 1,000,000 cycles.

Main Product Contents

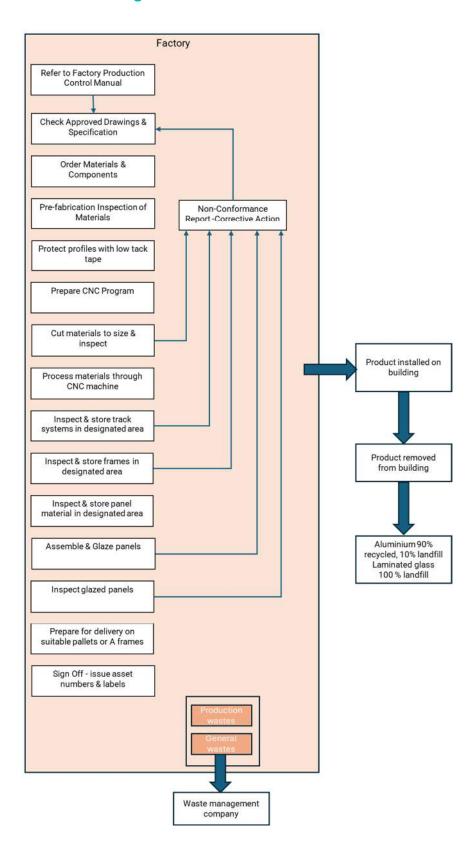
Material/Chemical Input	%
Aluminium extruded	29-33%
Glass	64-68%
Stainless steel	<1%
Handles	<2%
Plastic	<1%

Manufacturing Process

All components are brought to site. Most components are cut to size on site, apart from the glazed panels which are brought to site to the right size. All components are assembled on site. The door units are packaged and prepared for delivery.



Process flow diagram





End of Life

C1: All components are disassembled using a very small amount of energy and assumed to be zero in this EPD. this assumption is based on actual practice.

C2: All elements of the system can be disassembled and recycled through commonly available waste management processing plant estimated to be 50 km from a typical site

C3: No processing is required

C4: It was assumed the following recycling rate, based on and general practice:

-aluminium and stainless steel are widely recycled and based on BRE's PCR for EN15804+A2:2019 (BRE PN514 EN15804+A2 PCR V3.1.pdf (greenbooklive.com)), it was assumed that 95% was recycled and 5% sent to landfill

-laminated glass is typically hard to recycled, so it was assumed that it was 100% sent to landfill



Life Cycle Assessment Calculation Rules

Declared / Functional unit description

1 unit Single door F11 (299 kg), 1 unit Single door F12 (299 kg), 1 unit Single door F01 (3400 mm) (291 kg)

System boundary

In accordance with the modular approach as defined in EN15804:2012+A2:2019, this cradle-to-gate EPD includes the processes covered in the manufacturing site A1 to A3. It also includes C1 to C4 and module D.

Data sources, quality and allocation

Specific primary data derived from Axis Entrance Systems Ltd have been modelled using LINA v2 software for the period 1st April 2022 to 31st March 2023. In accordance with the requirements of EN15804, the most current available data has been used. Secondary data has been obtained for all remaining upstream and downstream processes that are beyond the control of the manufacturer 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 EN15804+A2:2019. The Single door F11, Single door F12, Single door F01 (3400 mm) are not the only products manufactured at the Axis Entrance Systems Ltd factory. An allocation by mass of the data has been carried out for energy, water and office wastes as follow:

Product description as per door schedule above	% allocation
Single Door F11	4%
Single Door F12	4%
Single Door F01 (3400 mm)	1%

The raw materials quantities were uplifted to account for the difference in the mass balance results. Production wastes has been specifically allocated for each product based on factory data.

Quality Level Geographical

Datasets representative of UK electricity have been selected from the ecoinvent LCI. The quality level of time and technological representativeness is good as the background LCI datasets are based on ecoinvent v3.8 which was compiled in 2021. Therefore, the most appropriate LCA data have been used.

The GWP of the dataset used for this EPD is: 1 kWh UK electricity = 2E-01 kgCO2eq (Electricity GB (kWh) market for electricity, medium voltage)

Cut-off criteria

This study includes the manufacturing of 1 unit Single door F11, 1 unit Single door F12, 1 unit Single door F01 (3400 mm) and the end of life scenarios of these products (modules C and D). The manufacturing process is mainly an assembly process, so there are no emissions to air, water and soil.



LCA Results - 1 unit Single door F11 (299 kg)

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

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Paramete	rs describin	g en	vironmen	tal impact	s							
			GWP-total	GWP- fossil	GWP- biogenic	GWP-luluc	ODP	AP	EP- freshwater			
			kg CO ₂ eq	kg CFC11 eq	mol H⁺ eq	kg (PO ₄) ³⁻ eq						
	Raw material supply	A1	1.76E+03	1.75E+03	-1.64E-01	4.22E+00	9.77E-05	1.21E+01	5.64E-01			
	Transport	A2	4.47E+00	4.46E+00	4.77E-03	1.92E-03	1.02E-06	1.91E-02	3.45E-04			
Product stage	Manufacturing	А3	1.29E+02	1.27E+02	2.15E+00	7.83E-02	1.06E-05	2.09E-01	1.25E-02			
	Total (Consumption grid)	A1 -3	1.89E+03	1.88E+03	1.99E+00	4.30E+00	1.09E-04	1.23E+01	5.77E-01			
	tals 95% recycle d glass 0% recyc											
	Deconstructio n, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
End of life	Transport	C2	2.49E+00	2.48E+00	2.12E-03	9.75E-04	5.75E-07	1.01E-02	1.60E-04			
End of life	Waste processing	С3	1.61E-01	1.61E-01	5.69E-05	1.61E-05	3.44E-08	1.67E-03	4.99E-06			
	Disposal	C4	1.30E+01	1.30E+01	1.95E-02	2.58E-03	7.44E-07	2.20E-02	7.35E-04			
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.93E+02	-4.94E+02	1.45E+00	-6.55E-01	-1.46E-05	-3.15E+00	-1.47E-01			

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



			EP-marine	EP-	POCP	ADP-	ADP-fossil	WDP	PM
			EP-manne	terrestrial	PUCP	mineral&m etals	ADY-10SSII	WDP	PIVI
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m ³ world eq deprived	disease incidence
	Raw material supply	A1	2.01E+00	2.11E+01	5.96E+00	1.10E-02	1.83E+04	5.22E+02	1.43E-04
Product stage	Transport	A2	5.77E-03	6.31E-02	1.96E-02	2.34E-05	6.73E+01	3.32E-01	4.00E-07
	Manufacturing	А3	9.30E-02	6.98E-01	1.90E-01	4.71E-04	2.86E+03	1.35E+01	1.64E-06
	Total (Consumption grid)	A1 -3	2.11E+00	2.19E+01	6.17E+00	1.15E-02	2.12E+04	5.36E+02	1.45E-04
	etals 95% recycled ass 0% recycled	and							
	Deconstruction, demolition	C 1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of Re-	Transport	C 2	3.04E-03	3.32E-02	1.02E-02	8.64E-06	3.75E+01	1.69E-01	2.14E-07
End of life	Waste processing	C 3	7.42E-04	8.13E-03	2.23E-03	8.29E-08	2.21E+00	5.11E-03	4.49E-08
	Disposal	C 4	7.91E-03	8.34E-02	2.37E-02	9.13E-06	5.50E+01	2.57E+00	3.99E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.27E-01	-5.51E+00	-1.59E+00	-4.26E-04	-4.44E+03	-5.85E+01	-4.07E-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.



Parameters de	scribing envi	ronm	ental impacts				
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U ²³⁵ eq	CTUe	CTUh	CTUh	dimensionless
	Raw material supply	A1	8.71E+01	5.84E+04	2.34E-06	3.93E-05	4.68E+03
Product stage	Transport	A2	3.58E-01	5.48E+01	2.55E-09	5.99E-08	4.41E+01
	Manufacturing	A3	6.25E+01	1.46E+03	3.69E-08	7.87E-07	7.27E+02
	Total (Consumption grid)	A1- 3	1.50E+02	5.99E+04	2.38E-06	4.01E-05	5.45E+03
Scenario: metals 95° laminated glass 0%	-						
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	1.93E-01	2.93E+01	9.49E-10	3.07E-08	2.58E+01
End of life	Waste processing	C3	9.96E-03	1.29E+00	5.00E-11	9.38E-10	2.82E-01
	Disposal	C4	2.69E-01	2.77E+03	3.84E-09	4.82E-08	1.25E+02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.85E+00	-1.27E+04	-5.20E-07	-1.08E-05	-9.20E+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.



Parameters describing resource use, primary energy PERE PERM **PERT** PENRE PENRM **PENRT** MJ MJ MJ MJ MJ MJ Raw material Α1 1.89E+03 0.00E+00 1.89E+03 1.81E+04 1.42E+02 1.82E+04 supply Transport A2 1.08E+00 0.00E+00 1.08E+00 6.61E+01 0.00E+00 6.61E+01 Product Manufacturing A3 4.38E+02 9.93E+00 4.48E+02 3.45E+03 5.04E+01 3.50E+03 stage Total (Consumption A1-3 2.33E+03 9.93E+00 2.34E+03 2.16E+04 1.92E+02 2.18E+04 grid) Scenario: metals 95% recycled and laminated glass 0% recycled Deconstruction 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 , demolition C2 Transport 5.29E-01 0.00E+00 5.29E-01 3.69E+01 0.00E+00 3.69E+01 End of life Waste C3 1.24E-02 0.00E+00 1.24E-02 2.17E+00 0.00E+00 2.17E+00 processing Disposal C4 1.02E+00 0.00E+00 1.02E+00 5.20E+01 0.00E+00 5.20E+01 Potential benefits and Reuse, loads recovery, D -2.70E+02 0.00E+00 -2.70E+02 -4.41E+03 0.00E+00 -4.41E+03 beyond the recycling system potential boundaries

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



Parameters des	scribing resou	rce use	e, secondary mate	erials and fuels, ι	ise of water	
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m³
	Raw material supply	A1	8.38E+00	0.00E+00	0.00E+00	1.32E+01
Product stage	Transport	A2	0.00E+00	0.00E+00	0.00E+00	8.22E-03
	Manufacturing	A3	2.41E-01	1.62E-03	0.00E+00	6.24E-01
	Total (Consumption grid)	A1-3	8.62E+00	1.62E-03	0.00E+00	1.38E+01
Scenario: metals 9 laminated glass 0%						
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	0.00E+00	0.00E+00	0.00E+00	4.19E-03
Life of file	Waste processing	С3	0.00E+00	0.00E+00	0.00E+00	1.26E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	6.05E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-1.57E+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



Other environme	ental informati	on desc	cribing waste categori	ies	
			HWD	NHWD	RWD
			kg	kg	kg
	Raw material supply	A1	3.14E+02	2.39E+03	4.12E-02
	Transport	A2	8.43E-02	1.56E+00	6.53E+01
Product stage	Manufacturing	A3	2.88E+00	5.24E+01	1.86E-02
	Total (Consumption grid)	A1-3	3.17E+02	2.44E+03	6.54E+01
Scenario: metals 95 glass 0% recycled	% recycled and la	minated			
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	4.14E-02	7.35E-01	2.54E-04
End of life	Waste processing	C3	2.91E-03	2.04E-02	1.53E-05
	Disposal	C4	1.64E-01	2.11E+02	3.12E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-9.75E+01	-6.13E+02	-5.08E-03

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



Other enviro	onmental infor	mation	describing	output flow	/s – at end o	of life		
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
				kg	kg	MJ per energy carrier	kg C	kg C
	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
Product stage	Manufacturing	A3	0.00E+00	2.75E-02	1.41E-05	1.34E+00	0.00E+00	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	2.75E-02	1.41E-05	1.34E+00	0.00E+00	0.00E+00
Scenario: meta	ils 95% recycled a s 0% recycled	ınd						
	Deconstruction , demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of file	Waste processing	C3	0.00E+00	2.80E+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	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



LCA Results - 1 unit Single door F12 (299 kg)

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

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Paramete	rs describin	g env	ironmenta	I impacts					
			GWP-total	GWP- fossil	GWP- biogenic	GWP- luluc	ODP	AP	EP- freshwate r
			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
	Raw material supply	A1	1.76E+03	1.75E+03	-1.64E-01	4.22E+00	9.77E-05	1.21E+01	5.64E-01
Product stage	Transport	A2	4.47E+00	4.46E+00	4.77E-03	1.92E-03	1.02E-06	1.91E-02	3.45E-04
	Manufacturing	A3	1.29E+02	1.27E+02	2.15E+00	7.83E-02	1.06E-05	2.09E-01	1.25E-02
	Total (Consumption grid)	A1-3	1.89E+03	1.88E+03	1.99E+00	4.30E+00	1.09E-04	1.23E+01	5.77E-01
	etals 95% recycled ass 0% recycled	d and							
	Deconstructio n, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
man agree	Transport	C2	2.49E+00	2.48E+00	2.12E-03	9.75E-04	5.75E-07	1.01E-02	1.60E-04
End of life	Waste processing	C3	1.61E-01	1.61E-01	5.69E-05	1.61E-05	3.44E-08	1.67E-03	4.99E-06
	Disposal	C4	1.30E+01	1.30E+01	1.95E-02	2.58E-03	7.44E-07	2.20E-02	7.35E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.93E+02	-4.94E+02	1.45E+00	-6.55E-01	-1.46E-05	-3.15E+00	-1.47E-01

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



			EP-marine	FP-	POCP	ADP-	ADP-fossil	WDP	PM
			El mame	terrestrial	1 001	mineral&m etals	7151 100011	WE	1 141
		kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m ³ world eq deprived	disease incidence	
	Raw material supply	A1	2.01E+00	2.11E+01	5.96E+00	1.10E-02	1.83E+04	5.22E+02	1.43E-04
Product	Transport	A2	5.77E-03	6.31E-02	1.96E-02	2.34E-05	6.73E+01	3.32E-01	4.00E-07
stage	Manufacturing	А3	9.30E-02	6.98E-01	1.90E-01	4.71E-04	2.86E+03	1.35E+01	1.64E-06
	Total (Consumption grid)	A1 -3	2.11E+00	2.19E+01	6.17E+00	1.15E-02	2.12E+04	5.36E+02	1.45E-04
	etals 95% recycled ass 0% recycled	and							
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	3.04E-03	3.32E-02	1.02E-02	8.64E-06	3.75E+01	1.69E-01	2.14E-07
End of file	Waste processing	СЗ	7.42E-04	8.13E-03	2.23E-03	8.29E-08	2.21E+00	5.11E-03	4.49E-08
	Disposal	C4	7.91E-03	8.34E-02	2.37E-02	9.13E-06	5.50E+01	2.57E+00	3.99E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.27E-01	-5.51E+00	-1.59E+00	-4.26E-04	-4.44E+03	-5.85E+01	-4.07E-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

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



Parameters	describing e	nviro	nmental imp	pacts			
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U ²³⁵ eq	CTUe	CTUh	CTUh	dimensionless
	Raw material supply	A1	8.71E+01	5.84E+04	2.34E-06	3.93E-05	4.68E+03
	Transport	A2	3.58E-01	5.48E+01	2.55E-09	5.99E-08	4.41E+01
Product stage	Manufacturing	A3	6.25E+01	1.46E+03	3.69E-08	7.87E-07	7.27E+02
	Total (Consumption grid)	A1- 3	1.50E+02	5.99E+04	2.38E-06	4.01E-05	5.45E+03
Scenario: metals	s 95% recycled and 0% recycled	d					
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E 1 6116	Transport	C2	1.93E-01	2.93E+01	9.49E-10	3.07E-08	2.58E+01
End of life	Waste processing	С3	9.96E-03	1.29E+00	5.00E-11	9.38E-10	2.82E-01
	Disposal	C4	2.69E-01	2.77E+03	3.84E-09	4.82E-08	1.25E+02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.85E+00	-1.27E+04	-5.20E-07	-1.08E-05	-9.20E+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.



Paramet	ers describin	g res	source use,	primary	energy			
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
	Raw material supply	A1	1.89E+03	0.00E+00	1.89E+03	1.81E+04	1.42E+02	1.82E+04
Product	Transport	A2	1.08E+00	0.00E+00	1.08E+00	6.61E+01	0.00E+00	6.61E+01
stage	Manufacturing	А3	4.38E+02	9.93E+00	4.48E+02	3.45E+03	5.04E+01	3.50E+03
	Total (Consumption grid)	A1 -3	2.33E+03	9.93E+00	2.34E+03	2.16E+04	1.92E+02	2.18E+04
	netals 95% recycled ted glass 0% recyc							
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	5.29E-01	0.00E+00	5.29E-01	3.69E+01	0.00E+00	3.69E+01
End of life	Waste processing	СЗ	1.24E-02	0.00E+00	1.24E-02	2.17E+00	0.00E+00	2.17E+00
	Disposal	C4	1.02E+00	0.00E+00	1.02E+00	5.20E+01	0.00E+00	5.20E+01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.70E+02	0.00E+00	-2.70E+02	-4.41E+03	0.00E+00	-4.41E+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



Parameters des	scribing resou	rce use,	secondary ma	aterials and fuels	, use of water	
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m ³
	Raw material supply	A1	8.38E+00	0.00E+00	0.00E+00	1.32E+01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	8.22E-03
Product stage	Manufacturing	A3	2.41E-01	1.62E-03	0.00E+00	6.24E-01
	Total (Consumption grid)	A1-3	8.62E+00	1.62E-03	0.00E+00	1.38E+01
Scenario: metals 9 glass 0% recycled	5% recycled and la	aminated				
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	0.00E+00	0.00E+00	0.00E+00	4.19E-03
End of life	Waste processing	СЗ	0.00E+00	0.00E+00	0.00E+00	1.26E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	6.05E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-1.57E+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



Other environmental information describing waste categories									
			HWD	NHWD	RWD				
			kg	kg	kg				
	Raw material supply	A1	3.14E+02	2.39E+03	4.12E-02				
	Transport	A2	8.43E-02	1.56E+00	6.53E+01				
Product stage	Manufacturing	А3	2.88E+00	5.24E+01	1.86E-02				
	Total (Consumption grid)	A1-3	3.17E+02	2.44E+03	6.54E+01				
Scenario: metals 95 glass 0% recycled	% recycled and la	minated							
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00				
End of life	Transport	C2	4.14E-02	7.35E-01	2.54E-04				
End of life	Waste processing	C3	2.91E-03	2.04E-02	1.53E-05				
	Disposal	C4	1.64E-01	2.11E+02	3.12E-04				
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-9.75E+01	-6.13E+02	-5.08E-03				

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



Other en	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		
	Raw material supply	A1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Product	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
stage	Manufacturing	A3	0.00E+00	2.75E-02	1.41E-05	1.34E+00	0.00E+00	0.00E+00		
	Total (Consumption grid)	A1-3	0.00E+00	2.75E-02	1.41E-05	1.34E+00	0.00E+00	0.00E+00		
	netals 95% recycled	and								
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
End of life	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
End of life	Waste processing	С3	0.00E+00	2.80E+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 boundarie	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



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

Paramete	rs describing	envir	onmental	impacts					
				GWP- fossil	GWP- biogenic	GWP- luluc	ODP	AP	EP- freshwater
				kg CO ₂ eq	kg CO₂ eq	kg CO ₂ eq	kg CFC11 eq	mol H⁺ eq	kg (PO ₄) ³⁻ eq
	Raw material supply	A1	1.84E+03	1.84E+03	-6.58E-01	4.50E+00	9.78E-05	1.26E+01	5.94E-01
Product	Transport	A2	4.40E+00	4.39E+00	4.72E-03	1.89E-03	1.00E-06	1.89E-02	3.40E-04
stage	Manufacturing	A3	1.26E+02	1.23E+02	2.13E+00	7.62E-02	1.03E-05	2.03E-01	1.22E-02
	Total (Consumption grid)	A1-3	1.97E+03	1.97E+03	1.48E+00	4.58E+00	1.09E-04	1.28E+01	6.07E-01
	etals 95% recycled ass 0% recycled	and							
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
En al relier	Transport	C2	2.42E+00	2.42E+00	2.06E-03	9.50E-04	5.60E-07	9.82E-03	1.56E-04
End of life	Waste processing	С3	1.55E-01	1.55E-01	5.49E-05	1.55E-05	3.32E-08	1.61E-03	4.81E-06
	Disposal	C4	1.29E+01	1.28E+01	1.83E-02	2.42E-03	6.94E-07	2.07E-02	6.91E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.40E+02	-5.41E+02	1.59E+00	-7.18E-01	-1.60E-05	-3.46E+00	-1.62E-01

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



			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 ³ world eq deprived	disease incidence
	Raw material supply	A1	2.09E+00	2.19E+01	6.20E+00	1.13E-02	1.91E+04	5.40E+02	1.50E-04
Product	Transport	A2	5.69E-03	6.22E-02	1.93E-02	2.32E-05	6.62E+01	3.27E-01	3.94E-07
stage	Manufacturing	A3	9.06E-02	6.80E-01	1.85E-01	4.59E-04	2.78E+03	1.32E+01	1.60E-06
	Total (Consumption grid)	A1-3	2.19E+00	2.26E+01	6.40E+00	1.18E-02	2.19E+04	5.54E+02	1.52E-04
	etals 95% recycled ass 0% recycled	and							
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	2.96E-03	3.23E-02	9.90E-03	8.41E-06	3.66E+01	1.65E-01	2.09E-07
End of life	Waste processing	С3	7.15E-04	7.84E-03	2.16E-03	7.99E-08	2.13E+00	4.93E-03	4.33E-08
	Disposal	C4	7.45E-03	7.83E-02	2.23E-02	8.62E-06	5.12E+01	2.40E+00	3.72E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.78E-01	-6.04E+00	-1.74E+00	-4.66E-04	-4.87E+03	-6.41E+01	-4.46E-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.



Parameters describing environmental impacts									
			IRP	ETP-fw	HTP-c	HTP-nc	SQP		
			kBq U ²³⁵ eq	CTUe	CTUh	CTUh	dimensionless		
	Raw material supply	A1	8.81E+01	5.96E+04	2.46E-06	4.17E-05	4.78E+03		
Product	Transport	A2	3.53E-01	5.40E+01	2.53E-09	5.90E-08	4.34E+01		
stage	Manufacturing	A3	6.09E+01	1.42E+03	3.59E-08	7.67E-07	7.07E+02		
	Total (Consumption grid)	A1-3	1.49E+02	6.11E+04	2.50E-06	4.25E-05	5.53E+03		
	etals 95% recycled a ass 0% recycled	and							
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
End of life	Transport	C2	1.88E-01	2.85E+01	9.24E-10	2.99E-08	2.51E+01		
Elia oi ille	Waste processing	С3	9.61E-03	1.25E+00	4.83E-11	9.05E-10	2.71E-01		
	Disposal	C4	2.52E-01	3.04E+03	3.73E-09	4.67E-08	1.15E+02		
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-6.41E+00	-1.39E+04	-5.69E-07	-1.19E-05	-1.01E+03		

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.



Paramete	ers describing	resou	ırce use, pr	imary ener	gy			
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
	Raw material supply	A1	1.99E+03	0.00E+00	1.99E+03	1.88E+04	1.43E+02	1.90E+04
Product	Transport	A2	1.07E+00	0.00E+00	1.07E+00	6.50E+01	0.00E+00	6.50E+01
stage	Manufacturing	A3	4.27E+02	9.93E+00	4.37E+02	3.36E+03	5.03E+01	3.41E+03
	Total (Consumption grid)	A1-3	2.42E+03	9.93E+00	2.43E+03	2.22E+04	1.93E+02	2.25E+04
	etals 95% recycled ass 0% recycled	and						
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End a site.	Transport	C2	5.15E-01	0.00E+00	5.15E-01	3.59E+01	0.00E+00	3.59E+01
End of life	Waste processing	С3	1.19E-02	0.00E+00	1.19E-02	2.09E+00	0.00E+00	2.09E+00
	Disposal	C4	9.66E-01	0.00E+00	9.66E-01	4.84E+01	0.00E+00	4.84E+01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.96E+02	0.00E+00	-2.96E+02	-4.83E+03	0.00E+00	-4.83E+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



Parameters des	scribing resou	rce use,	secondary ma	aterials and fuels	, use of water	
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m ³
	Raw material supply	A1	8.96E+00	0.00E+00	0.00E+00	1.37E+01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	8.11E-03
Product stage	Manufacturing	A3	2.35E-01	1.57E-03	0.00E+00	6.09E-01
	Total (Consumption grid)	A1-3	9.20E+00	1.57E-03	0.00E+00	1.43E+01
Scenario: metals 9 glass 0% recycled		aminated				
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	0.00E+00	0.00E+00	0.00E+00	4.08E-03
End of life	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	1.22E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	5.65E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-1.72E+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



Other environm	ental informati	on descr	ibing waste categori	es	
			HWD	NHWD	RWD
			kg	kg	kg
	Raw material supply	A1	3.35E+02	2.51E+03	4.18E-02
	Transport	A2	8.32E-02	1.54E+00	6.55E+01
Product stage	Manufacturing	А3	2.81E+00	5.12E+01	1.81E-02
	Total (Consumption grid)	A1-3	3.38E+02	2.56E+03	6.56E+01
Scenario: metals 95 glass 0% recycled	5% recycled and la	minated			
	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
End of life	Transport	C2	4.03E-02	7.16E-01	2.47E-04
Elia ol lile	Waste processing	C3	2.81E-03	1.97E-02	1.47E-05
	Disposal	C4	1.63E-01	1.95E+02	2.89E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.07E+02	-6.71E+02	-5.57E-03

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



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	2.68E-02	1.37E-05	1.30E+00	0.00E+00	0.00E+00			
	Total (Consumption grid)	A1-3	0.00E+00	2.68E-02	1.37E-05	1.30E+00	0.00E+00	0.00E+00			
Scenario: metals 95% recycled and laminated glass 0% recycled											
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	С3	0.00E+00	2.70E+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	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

Scenario	Parameter					Units	Results
C1 to C4 End of life,							
C1 - Deconstruction	All components amount of ener this assumption	gy and assum	N/A	0			
C2 - Transport from site to pre-processing facility or landfill	All elements of recycled through processing plan	h commonly a	km	50			
C3 - Pre-processing of uninstalled product (if relevant)	According to BRE's PCR for EN15804:2019+A2, metals can be recycled Recycling quantities in kg Aluminium Steel Single door F11 83 2.8 Single door F12 83 2.8 Single door F01 (3400 mm)					%	95
C4 – Disposal	According to BI metals are land Laminated glas assumed that it Landfill quantiti Single door F11 Single door F12 Single door F01 (3400 mm)	filled s is typically h was 100% se	ard to re	cycled, s		%	5 100
Module D	Single door F Single door F Single door F (3400 mm)	Alum 11 21.8 12 21.8 01 23.9 I that the prim	21.8 1.5 23.9 1.5 se primary content of				



Interpretation of results

Figures 1 below show the results in kgCO₂eq per stage for 1 unit single door F11 (299 kg). It shows that 93% of the impact of this product is associated with the impact of the raw materials.

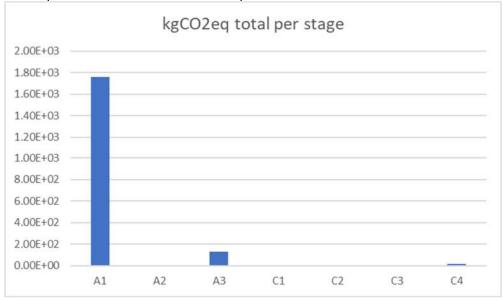


Figure 1: kgCO₂eq per stage for 1 unit single door F11

Further analysis of stage A1 shows that 76% of the $kgCO_2eq$ of 1 unit single door F11 are associated with the aluminium and 21% is associated with the glass – see figure 2:

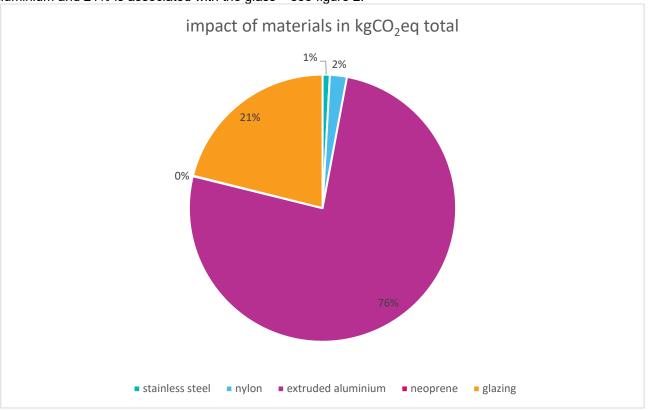


Figure 2: kgCO2eq per raw materials in A1 for 1 unit single door F11



Figures 3 below show the results in kgCO₂eq per stage for 1 unit single door F12 (299 kg). It shows that 93% of the impact of this product is associated with the impact of the raw materials.

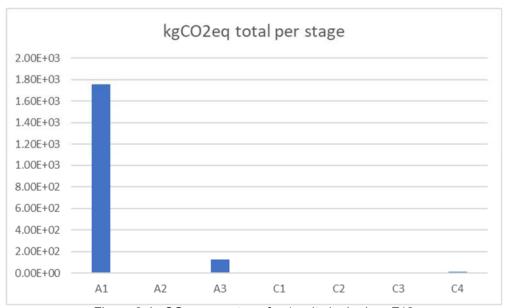


Figure 3: kgCO₂eq per stage for 1 unit single door F12

Further analysis of stage A1 shows that 76% of the $kgCO_2eq$ of 1 unit single door F12 are associated with the aluminium and 21% is associated with the glass – see figure 4:

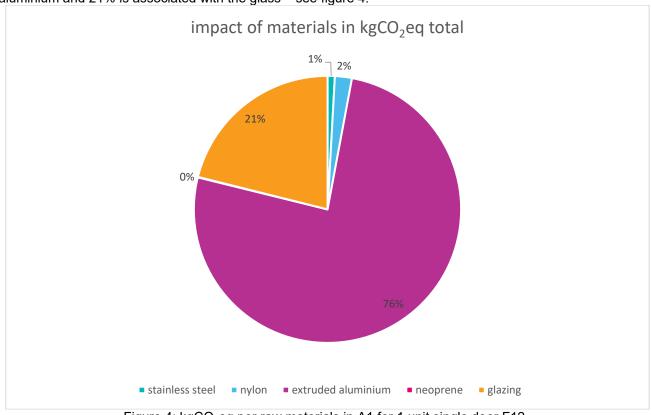


Figure 4: kgCO₂eq per raw materials in A1 for 1 unit single door F12



Figures 5 below show the results in kgCO₂eq per stage for 1 unit single door F01 (3400 mm) (291 kg). It shows that 93% of the impact of this product is associated with the impact of the raw materials.

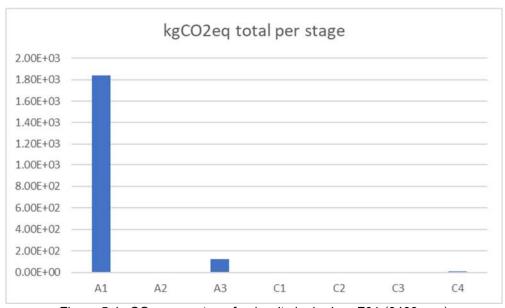


Figure 5: kgCO₂eq per stage for 1 unit single door F01 (3400 mm)

Further analysis of stage A1 shows that 79% of the kgCO2eq of 1 unit single door F01 (3400 mm) are associated with the aluminium and 18% is associated with the glass – see figure 6:

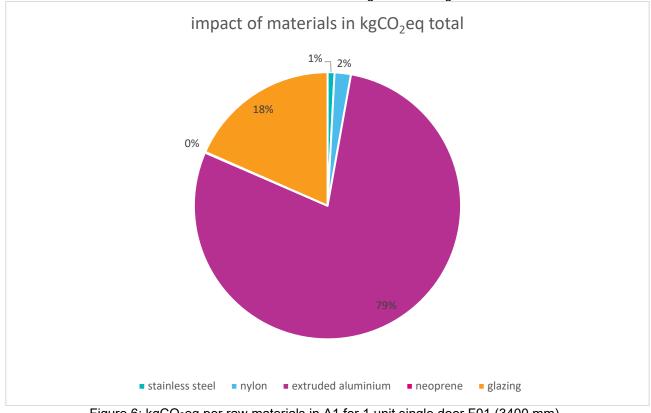


Figure 6: kgCO₂eq per raw materials in A1 for 1 unit single door F01 (3400 mm)



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