ENVIRONMENTAL PRODUCT DECLARATION

In accordance with EN 15804 and ISO 14025

Ecophon Connect™ Angle Trims C1, C3, C4

Programme: The International EPD® System,
Programme operator: EPD International AB
Version: 1.0
Registration number: S-P-05278

Date of publication (issue): 2021-12-08
Date of revision: 2022-05-11
Date of validity: 2026-12-08
In accordance with ISO 14025, ISO 21930 and EN 15804

The environmental impacts of this product have been assessed over its whole life cycle. Its Environmental Product Declaration has been verified by an independent third party.

Ecophon
SAINT-GOBAIN

Summary Environmental product declaration

Content summary	
Verified by (external third-party verifier)	Martin Erlandsson, IVL Swedish Environmental Research Institute
Programme used	The International EPD System. For more information see www.environdec.com
Registration No	S-P-05278
Owners declaration by	Saint-Gobain Ecophon AB Box 500 265 03 Hyllinge Sweden
Declaration as construction products	The products to be verified herein are grid profiles for ceiling suspension systems. The present environmental product declaration complies with standard ISO 14025 and describes the environmental impact. Its purpose is to promote compatible and sustainable environmental development of related construction methods. Reference PCR document: EN 15804 as the core PCR + International EPD System Product Category Rules – PCR for constructions products and construction services. EPD of construction products may not be comparable if they do not comply with EN 15804.
Validity	2026-12-08
Content of the declaration	This is an environmental product declaration containing environmental information of the product in the Ecophon family Angle Trims C1, C3, C4. The values presented in this EPD are represented for the following products: Angle trim 15/22, Angle trim 15/22 C4, Angle trim 22/22, Angle trim 22/22 C3 Supplemental product information can be found at www.ecophon.com
Issued date	2021-12-08

Product responsible:

Thomas Roul
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Independent third party verifier:

Martin Erlandsson
LCA Business Development Manager
IVL

Product description

Product description and description of use:

This Environmental Product Declaration (EPD) describes the environmental impact of 1 linear meter (1 lm) of installed steel profile with the intended use to suspend acoustic ceiling tiles.

The production site of Saint-Gobain Ecophon (Sweden) manufactures ceiling grid systems in different sizes. Cold rolled steel is shaped into a "body" through a process called roll forming. Multiple holes are then punched in the body to allow installation. Lastly, a cap of steel ("capping") is added on the body to make the grid visually appealing. The capping is added to the body. The finished grids are then packed in cardboard boxes. The grids provide excellent mechanical characteristics to suspend acoustic ceiling tiles, which contribute to a better health by their sound absorption capabilities. There is no maintenance needed for the grids except for normal room surface cleaning and there is no ageing, hence the grid system can last for the building lifetime.

Description of the main product and materials for 1 lm of product:

Parameter	Value
Product height	15-22 mm
Product width	22 mm
Hot-dip galvanized steel	>99.7wt.%

Total weights				
Product	Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Total weight [kg]	0,20	0,20	0,20	0,20

All raw materials contributing more than 5% to any environmental impact are listed in the table above. The panels are free from substances of very high concern (SVHC). The product contains no substances from the REACH Candidate list (of 01.11.2021).

If in the future product changes that generate an increased impact larger than 10% occur, the EPD will be updated and re-verified.

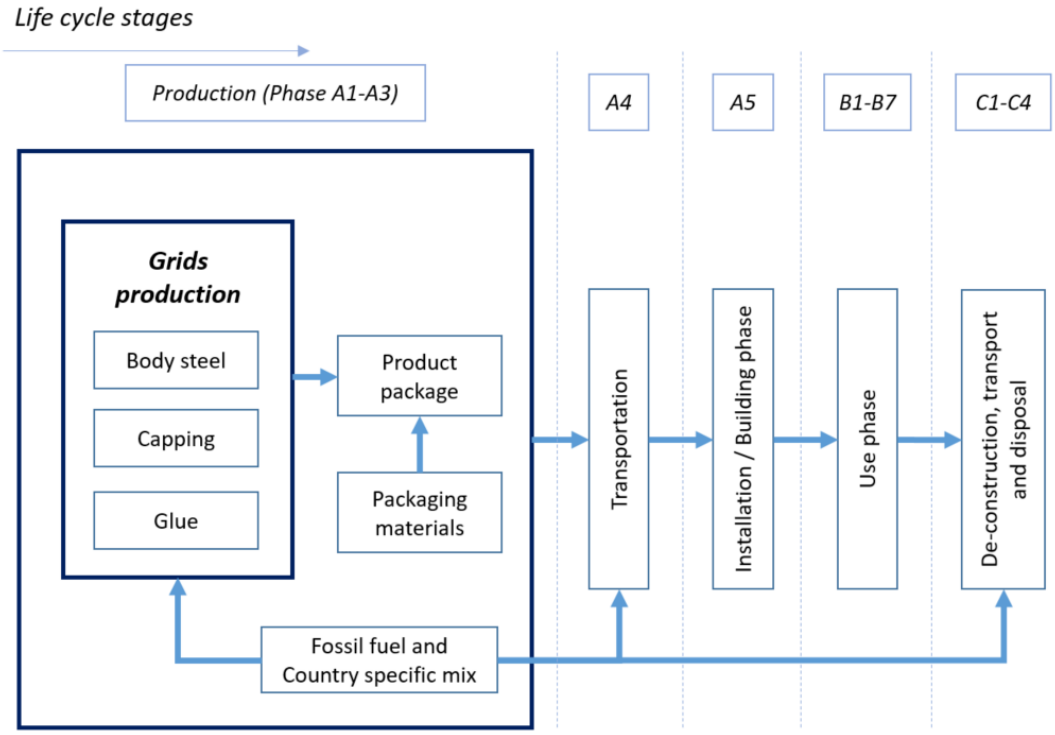
LCA calculation information

Declared unit	1 lm of installed steel profile
System boundaries	Cradle to grave: Mandatory stages = A1-3, A4-5, B1-7, C1-4 and optional stage = D This EPD covers the environmental impact of only the ceiling profiles.
Reference Service Life (RSL)	50 years
Cut-off rules	The use of cut-off criterion on mass inputs and primary energy at the unit process level (1%) and at the information module level (5%). Flows related to human activities such as employee transport are excluded. Biogenic carbon has not been included in calculations. The construction of plants, production of machines and transportation systems are excluded since the related flows are supposed to be negligible compared to the production of the building product when compared at these systems lifetime level.
Allocations	Allocation criteria are based on mass.
Geographical coverage and time period	For A1-A3: Global For A4 : European covering (2019)

According to EN 15804, EPD of construction products might not be comparable if they do not comply with this standard. According to ISO 21930, EPD's might not be comparable if they are from different EPD administrating schemes.

Life Cycle stages

Flow diagram of the Life Cycle



Product stage, A1-A3

Description of the stage:
The product stage is divided into 3 modules: A1 "Raw material and supply", A2 "Transport to the manufacturer" and A3 "Manufacturer". The aggregation of the modules A1, A2 and A3 is a possibility considered by the EN 15 804 standard. This rule is applied in this EPD.

A1 Raw material supply
This module takes into account the extraction and processing of all raw materials and energy which occur upstream to the studied manufacturing process. Specifically, the steel material supply covers production of the cold rolled steel and eventual coating. Packaging and glue production is also included here. All electricity is taken account for in (GOs) or at least country specific mix.

A2 Transport to the manufacturer
The raw materials are transported to the manufacturing site. In our case, the modelling includes: road, boat or train transportations (average values) of each raw material.

A3 Manufacturing
Cold rolled steel is transformed by deforming, shaping and cutting the raw material into the final dimensions. Manufacturing covers all processes linked to production, which comprises various related operations besides on-site activities such as perforation, pinching, packaging and internal transportation.

The environmental profile of these energy carriers is modelled for local conditions. Packaging-related flows in the production process and all up-stream packaging are included in the manufacturing module, i.e. wooden pallets and cardboard. Apart from production of packaging material, the supply and transport of packaging material are also considered in the LCA model. They are reported and allocated to the module where the packaging is applied. Data on packaging waste created during this step is then generated. It is assumed that packaging waste generated in the course of production and up-stream

processes is 100% collected and either recycled or incinerated with energy recovery, related to material and quality, in ratios according to the local material handling companies.

Construction process stage, A4-A5

Description of the stage:
The construction process is divided into 2 modules: A4 "Transport to the building site" and A5 "Installation in the building.

Description of scenarios and additional technical information:
A4 Transport to the building site
This module includes transport from the production gate to the building site. Transport is calculated on the basis of a scenario with the parameters described in the following table.

Parameter	Value
Fuel type, consumption of fuel and vehicle or vehicle type used for transport	Average truck trailer with a 24t payload, diesel consumption 31.7 litres for 100 km
Distance	475 km (based on transports in 2019)
Capacity utilisation (including empty returns)	90% of the capacity in volume 100% of empty returns
Bulk density of transported products (if available)	0,16 - 0,19 kg/m
Volume capacity utilisation factor (if available)	0.45

The transport distance has been calculated from a European average transport for Ecophon in 2019 from the parameters in the table above.

A5:1 Installation in the building
This module includes waste of products during the implementation, i.e. the additional production processes to compensate the loss and the waste processing which occur in this stage.

Scenarios used for product waste quantity and waste processing are:

Parameter	Value
Waste of materials on the building site before waste processing, generated by the product's installation	5%
Output materials (specified by type) as results of waste processing at the building site e.g. of collection for recycling, for energy recovering, disposal	Packaging waste is 100 % collected and modelled as material for recycling Grid waste is recycled.

A5:2 Energy usage
As a general figure the time to install 1 m^2 ceiling is considered to be 20 minutes. During this time the installer is considered to use handheld appliances for about 5% of this time which in this case results in 1 minute. A handheld device such as a cordless screwdriver is considered to have a power of 0.7 kilowatt. Therefore, in one minute it will consume a total energy of 0.7*60 = 4.2 kilojoule = 0.0042 MJ, per m^2 ceiling. In this context it is a negligible contribution and will not be part of the LCA calculation (lower than 0.1% of the total energy consumption).

Use stage (excluding potential savings), B1-B7

Description of the stage:
The use stage is divided into 7 modules, B1 "Use", B2 "Maintenance", B3 "Repair", B4 "Replacement", B5 "Refurbishment", B6 "Operational energy use", B7 "Operational water use"
Description of scenarios and additional technical information:
Once installation is complete, no actions or technical operations are required during the use stages until the end of life stage. Therefore, grids have no impact on this stage.

End-of-life stage C1-C4

Description of the stage:
The end-of life stage is divided into 4 modules; C1 "De-construction, demolition", C2 "Transport to waste processing", C3 "Waste processing for reuse, recovery and/or recycling", C4 "Disposal".

Description of scenarios and additional technical information:

C1, De-construction, demolition
The dismantling of the grid system is assumed to be very small and can therefore be neglected.

C2, Transport to waste processing
The model for transportation (see A4, Transportation to the building site) is applied.

C3, Waste processing for reuse, recovery and/or recycling;
Minimal processing before recycling.

C4, Disposal;
The product is assumed to be 100% recycled.

Parameter	Value/description
Collection process specified by type	0,16 - 0,19 kg of steel grid
Recovery system specified by type	Grid collected as sorted metal
Disposal specified by type	0,16 - 0,19 kg of grid to recycling
Assumptions for scenario development (e.g. transportation)	Average truck trailer with a 24t payload, diesel consumption 31.7 litres for 100 km 50 km (distance to recycling)

Reuse/recovery/recycling potential, D

Not declared.

LCA results

LCA model, aggregation of data and environmental impact are calculated through the GaBi Professional software. Secondary data is mainly taken from Ecoinvent 3.7 with some GaBi datasets.

Raw materials and energy consumption, as well as transport distances have been taken directly from the manufacturing plants of Saint-Gobain Ecophon in 2019.

Modules declared and geographical scope are stated in the following table.

	Product phase			**Construction process phase**		**Use phase**							**End of life phase**					**Resource recovery phase**
	Raw material and supply	Transport to the manufacturer	Manufacturing	Transport to the building site	Installation in the building	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport to waste processing	Waste processing	Disposal		Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
Modules declared	X	X	X	X	X	x	X	X	X	X	X	X	X	X	X	X		MND
Geography	GLO	GLO	SE	EU	EU								EU	EU	EU	EU		-
Specific data	<10%			-														-
Variation sites	N/A			-														-

Summary of the LCA results are detailed in the tables below.

All results in the EPD are written in logarithmic base of ten. Reading example:
5.2E -03 = $5.2 * 10^{-3}$ = 0,0052.

MND (module not declared), is equal to MNA (module not assessed).

Environmental impact.

Environmental impacts					
Parameters		Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Global Warming Potential (GWP) - kg CO_2 equiv./FU	A1-A3	4,92E-01	4,78E-01	5,04E-01	5,04E-01
	A4	6,11E-03	6,11E-03	1,90E-02	1,90E-02
	A5	2,50E-02	2,43E-02	2,52E-02	2,52E-02
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	6,43E-04	6,43E-04	6,85E-04	6,85E-04
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	5,24E-01	5,09E-01	5,49E-01	5,49E-01
		The global warming potential of a gas refers to the total contribution to global warming resulting from the emission of one unit of that gas relative to one unit of the reference gas, carbon dioxide, which is assigned a value of 1.			
Ozone Depletion (ODP) kg CFC 11 equiv./FU	A1-A3	7,27E-10	7,19E-10	9,47E-10	9,47E-10
	A4	1,39E-18	1,39E-18	4,33E-18	4,33E-18
	A5	3,64E-11	3,60E-11	4,73E-11	4,73E-11
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	1,46E-19	1,46E-19	1,56E-19	1,56E-19
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	7,63E-10	7,55E-10	9,94E-10	9,94E-10
		Destruction of the stratospheric ozone layer which shields the earth from ultraviolet radiation harmful to life. This destruction of ozone is caused by the breakdown of certain chlorine and/or bromine containing compounds (chlorofluorocarbons or halogens), which break down when they reach the stratosphere and then catalytically destroy ozone molecules.			
Acidification potential (AP) kg SO_2 equiv./FU	A1-A3	1,11E-03	1,07E-03	1,12E-03	1,12E-03
	A4	8,26E-06	8,26E-06	2,57E-05	2,57E-05
	A5	5,58E-05	5,44E-05	5,62E-05	5,62E-05
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	8,70E-07	8,70E-07	9,28E-07	9,28E-07
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	1,17E-03	1,14E-03	1,20E-03	1,20E-03
		Acid depositions have negative impacts on natural ecosystems and the man-made environment incl, buildings. The main sources for emissions of acidifying substances are agriculture and fossil fuel combustion used for electricity production, heating and transport.			
Eutrophication potential (EP) kg $(PO_4)^{3-}$ equiv./FU	A1-A3	2,61E-04	2,55E-04	2,27E-04	2,27E-04
	A4	1,75E-06	1,75E-06	5,44E-06	5,44E-06
	A5	1,31E-05	1,28E-05	1,13E-05	1,13E-05
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	1,84E-07	1,84E-07	1,96E-07	1,96E-07
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	2,76E-04	2,70E-04	2,44E-04	2,44E-04
		Excessive enrichment of waters and continental surfaces with nutrients, and the associated adverse biological effects.			
Photochemical ozone creation (POPC) kg Ethene equiv./FU	A1-A3	1,80E-04	1,76E-04	1,89E-04	1,89E-04
	A4	-2,47E-06	-2,47E-06	-7,69E-06	-7,69E-06
	A5	8,88E-06	8,62E-06	9,46E-06	9,46E-06
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	-2,60E-07	-2,60E-07	-2,77E-07	-2,77E-07
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	1,87E-04	1,82E-04	1,91E-04	1,91E-04
		Chemical reactions brought about by the light energy of the sun. The reaction of nitrogen oxides with hydrocarbons in the presence of sunlight to form ozone is an example of a photochemical reaction.			
Abiotic depletion potential for non-fossil resources (ADP-elements) - kg Sb equiv./FU	A1-A3	2,31E-06	2,25E-06	2,40E-06	2,40E-06
	A4	2,25E-10	2,25E-10	6,99E-10	6,99E-10
	A5	1,15E-07	1,12E-07	1,20E-07	1,20E-07
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	2,36E-11	2,36E-11	2,52E-11	2,52E-11
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	2,43E-06	2,36E-06	2,52E-06	2,52E-06
Abiotic depletion potential for fossil resources (ADP-fossil fuels) - MJ/FU	A1-A3	4,91E+00	4,80E+00	5,03E+00	5,03E+00
	A4	8,40E-02	8,40E-02	2,61E-01	2,61E-01
	A5	2,51E-01	2,44E-01	2,51E-01	2,51E-01
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	8,84E-03	8,84E-03	9,43E-03	9,43E-03
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	5,26E+00	5,13E+00	5,55E+00	5,55E+00
		Consumption of non-renewable resources, thereby lowering their availability for future generations.			

Resource use

Environmental impacts					
Parameters		Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Use of renewable primary energy excluding renewable primary energy resources used as raw materials - MJ /FU	A1-A3	6.07E-01	6.02E-01	3.96E-01	3.96E-01
	A4	2.05E-03	2.05E-03	6.37E-03	6.37E-03
	A5	3,04E-02	3,02E-02	1,98E-02	1,98E-02
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	2,15E-04	2,15E-04	2,30E-04	2,30E-04
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	6,40E-01	6,35E-01	4,22E-01	4,22E-01
Use of renewable primary energy used as raw materials - MJ /FU	A1-A3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A5	0,00E+00	0,00E+00	-2,28E-01	-2,28E-01
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	0,00E+00	0,00E+00	-2,28E-01	-2,28E-01
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) - MJ /FU	A1-A3	6,07E-01	6,02E-01	3.96E-01	3.96E-01
	A4	2,05E-03	2,05E-03	6,37E-03	6,37E-03
	A5	3,04E-02	3,02E-02	-2,08E-01	-2,08E-01
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	2,15E-04	2,15E-04	2,30E-04	2,30E-04
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	6,40E-01	6,35E-01	1,94E-01	1,94E-01
		Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials - MJ /FU	A1-A3	5,20E+00	5,07E+00	5,32E+00	5,32E+00
	A4	8.48E-02	8.48E-02	2.64E-01	2.64E-01
	A5	2,65E-01	2,58E-01	2,66E-01	2,66E-01
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	8,93E-03	8,93E-03	9,53E-03	9,53E-03
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	5,55E+00	5,42E+00	5,86E+00	5,86E+00
Use of non-renewable primary energy used as raw materials - MJ /FU	A1-A3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A5	0,00E+00	0,00E+00	-1,45E-02	-1,45E-02
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	0,00E+00	0,00E+00	-1,45E-02	-1,45E-02
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) - MJ /FU	A1-A3	5,20E+00	5,07E+00	5,32E+00	5,32E+00
	A4	8,48E-02	8,48E-02	2,64E-01	2,64E-01
	A5	2,65E-01	2,58E-01	2,52E-01	2,52E-01
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	8,93E-03	8,93E-03	9,53E-03	9,53E-03
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	5,55E+00	5,42E+00	5,85E+00	5,85E+00
		Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Use of secondary material Kg/FU	A1-A3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A5	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	0,00E+00	0,00E+00	0,00E+00	0,00E+00
		Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Use of renewable secondary fuels MJ /FU	A1-A3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A5	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	0,00E+00	0,00E+00	0,00E+00	0,00E+00
		Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Use of non-renewable secondary fuels - MJ /FU	A1-A3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A5	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	0,00E+00	0,00E+00	0,00E+00	0,00E+00
		Angle trim 15/22	Angle trim 15/22 C4	Angle trim 22/22	Angle trim 22/22 C3
Use of net fresh water m³ /FU	A1-A3	3.27E-03	3.19E-03	3.32E-03	3.32E-03
	A4	5,18E-07	5,18E-07	1,61E-06	1,61E-06
	A5	1,63E-04	1,59E-04	1,66E-04	1,66E-04
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	5,46E-08	5,46E-08	5,82E-08	5,82E-08
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	3,43E-03	3,35E-03	3,49E-03	3,49E-03

Waste categories

Environmental impacts					
Parameters		Angletrim 15/22	Angletrim 15/22 C4	Angletrim 22/22	Angletrim 22/22 C3
Hazardous waste disposed kg /FU	A1-A3	3.81E-09	3.71E-09	3.76E-09	3.76E-09
	A4	9.04E-13	9.04E-13	2.81E-12	2.81E-12
	A5	1,90E-10	1,86E-10	1,88E-10	1,88E-10
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	9,51E-14	9,51E-14	1,01E-13	1,01E-13
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	4,00E-09	3,90E-09	3,95E-09	3,95E-09
		Angletrim 15/22	Angletrim 15/22 C4	Angletrim 22/22	Angletrim 22/22 C3
Non-hazardous waste disposed - kg /FU	A1-A3	3,74E-02	3,32E-02	3,64E-02	3,64E-02
	A4	2,28E-06	2,28E-06	7,10E-06	7,10E-06
	A5	1,87E-03	1,66E-03	1,82E-03	1,82E-03
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	2,40E-07	2,40E-07	2,56E-07	2,56E-07
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	3,93E-02	3,49E-02	3,82E-02	3,82E-02
		Angletrim 15/22	Angletrim 15/22 C4	Angletrim 22/22	Angletrim 22/22 C3
Radioactive waste disposed kg /FU	A1-A3	4,68E-07	4,61E-07	1,68E-06	1,68E-06
	A4	9,94E-08	9,94E-08	3,10E-07	3,10E-07
	A5	2,93E-08	2,89E-08	8,41E-08	8,41E-08
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	1,05E-08	1,05E-08	1,12E-08	1,12E-08
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND

Output flow

Environmental impacts					
Parameters		Angletrim 15/22	Angletrim 15/22 C4	Angletrim 22/22	Angletrim 22/22 C3
Components for re-use kg/FU	A1-A3	-	-	-	-
	A4	-	-	-	-
	A5	-	-	-	-
	B1-B7	-	-	-	-
	C1	-	-	-	-
	C2	-	-	-	-
	C3	-	-	-	-
	C4	-	-	-	-
	D	MND	MND	MND	MND
	Total A-C	-	-	-	-
		Angletrim 15/22	Angletrim 15/22 C4	Angletrim 22/22	Angletrim 22/22 C3
Materials for recycling kg/FU	A1-A3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A5	1,29E-02	1,28E-02	2,30E-02	2,30E-02
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	1.59E-01	1.59E-01	1.70E-01	1.70E-01
	D	MND	MND	MND	MND
	Total A-C	1,72E-01	1,72E-01	1,93E-01	1,93E-01
		Angletrim 15/22	Angletrim 15/22 C4	Angletrim 22/22	Angletrim 22/22 C3
Materials for energy reovery - kg/FU	A1-A3	-	-	-	-
	A4	-	-	-	-
	A5	-	-	-	-
	B1-B7	-	-	-	-
	C1	-	-	-	-
	C2	-	-	-	-
	C3	-	-	-	-
	C4	-	-	-	-
	D	MND	MND	MND	MND
	Total A-C	-	-	-	-
		Angletrim 15/22	Angletrim 15/22 C4	Angletrim 22/22	Angletrim 22/22 C3
Exported energy MJ/FU	A1-A3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	A5	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C1	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C2	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C3	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	C4	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	D	MND	MND	MND	MND
	Total A-C	-	-	-	-

Summary

Aggregation of results from A1 to C4 in selected impact categories.

	Angle trim 15/22	Angle trim 15/22 C 4	Angle trim 22/22	Angle trim 22/22 C 3
Global warming  kg CO_2equiv/FU	0,52	0,51	0,55	0,55
Non-renewable resources consumption *[1]*  MJ/FU	5,3	5,1	5,5	5,5
Energy consumption *[2]*  MJ/FU	6,2	6,1	6,0	6,0
Water consumption *[3]*  m^3/FU	0,003	0,003	0,003	0,003
Waste production *[4]*  kg/FU	0,04	0,03	0,04	0,04

[1] This indicator corresponds to the abiotic depletion potential of fossil resources.

[2] This indicator corresponds to the total use of primary energy.

[3] This indicator corresponds to the use of net fresh water.

[4] This indicator corresponds to the sum of hazardous, non-hazardous and radioactive waste disposed.

Reference list

Reach: EU REACH Regulation (EC) No 1907/2006

LCA report: Project report on Ecophon Grids LCA 2021-12-06

EN 15804:2012+A1:2013: Sustainability of construction works - Environmental product declarations

PCR 2012:01 Construction products and construction services (version 2.33 dated 2020-09-18)

Difference from previous versions

New company logo and correction of few product weights on page 3.

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