

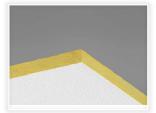






# ENVIRONMENTAL PRODUCT DECLARATION In accordance with EN 15804 and ISO 14025

# Ecophon Gedina<sup>™</sup>



Programme: The International EPD® System, www.environdec.com Programme operator: EPD International AB Version: 1.0 Registration number: S-P-03227

Date of publication (issue): 2021-03-05 Date of revision: 2022-03-07 Date of validity: 2026-03-05 In accordance with ISO 14025, ISO 21930 and EN 15804





# 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-03227
Owners declaration by	Saint-Gobain Ecophon AB Box 500 265 03 Hyllinge Sweden
Declaration as construction products	The products to be verified herein are acoustic glass wool panels made for sound absorbing ceilings. 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, Acoustical systems solutions (sub-oriented PCR; appendix to PCR 2012:01) - previously Acoustic ceilings. EPD of construction products may not be comparable if they do not comply with EN 15804.
Validity	2026-03-05
Content of the declaration	This is an environmental product declaration containing environmental information of the product in the Ecophon family Gedina. The values presented in this EPD are represented for the following products: Gedina A, Gedina E, Gedina D/A Supplemental product information can be found at www.ecophon.com
UN CPC (Central Product Classification) CODE	37990 37129
Issued date	2021-03-05

Product responsible:

Huend

Thomas Roul Product Engineering & Development Manager Saint-Gobain Ecophon AB

Independent third party verifier:

V HEAN CRANISSON

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 1m<sup>2</sup> of acoustic ceiling with the intended use to increase sound absorption in a room to create a better indoor environment.

This Environmental Product Declaration (EPD) are valid for products produced in Ecophon production plants in Sweden, Denmark, Poland and Finland with a high-quality glass wool in different densities and thicknesses. The glass wool is covered with a painted or woven surface layer and cut into panels of different sizes and edge designs. The edges are painted and the panels are packed in cardboard boxes.

The structure of glass wool gives the material excellent sound energy absorption properties. Sound absorption is the main function of acoustic glass wool panels. The panels are also light, stable, and easy to handle and cut.

Acoustic glass wool panels are commonly used in schools, offices, health care facilities and production premises where there is a need for noise reduction to improve the working environment. The decrease in reverberation time, sound pressure level and other acoustic parameters are related to the amount of panels used in the room as well as the placement of the panels. The acoustic panels need no maintenance and do not age. They can last as long as the building itself. For aesthetic reasons, normal room surface cleaning is advised.

#### Description of the main product components and materials for 1 m<sup>2</sup> of product:

Parameter	Value (Weight in %)	Post-consumer recycled content
Product thickness	15-20 mm	
Glass wool	48%-78%	70%
Waterborne paint	3% - 9%	•
Glass tissue	18%-41%	
Waterborne glue	3% - 9%	•
Plastic wrapping	20 g	•

Total weights								
Product	Gedina A	Gedina E	Gedina D/A					
Total weight [kg]	1,3	1,3	1,9					

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 15.06.2018).

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

## Other environmental indicators

Regarding the indoor environment, the Gedina products are certified for or fulfil regulations according to the following table:

Certificate and Regulations	
Finnish M1	
Eurofins Indoor Air Comfort	

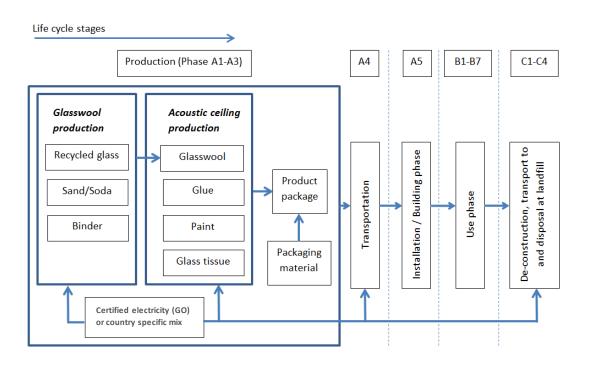
## LCA calculation information

Declared unit	1 m <sup>2</sup> of acoustic celling panel.
Functional unit	1 m <sup>2</sup> acoustic ceiling with sound absorption class A installed at an ODS of 200mm according to ISO 354.
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 acoustic panels without grid or suspension system.
Reference Service Life (RSL)	50 years
Cut-off rules	<ul> <li>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%).</li> <li>Flows related to human activities such as employee transport are excluded.</li> <li>Biogenic carbon has not been included in calculations.</li> <li>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.</li> </ul>
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 of the glass wool products 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 glass wool raw material supply covers production of the binder components and sourcing (quarry) of raw materials for fiber production, e.g. sand and borax. Besides these raw materials, recycled materials (glass cullet) are also used as input. Other major raw materials are paint, glass tissue and glue which also are included in the calculation. 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

The manufacturing includes two steps; glass wool production and glass wool panel production. The glass wool panels are produced in a continuous online process starting with applying glass tissue on the glass wool baseboard. The panels are cut into correct size and the edges of the panels are painted. After drying the panels are packed in cardboard boxes.

Manufacturing covers all processes linked to production, which comprises various related operations besides on-site activities such as grinding, painting and drying, packaging and internal transportation. The manufacturing process also yields data on the combustion of refinery products, such as natural gas, diesel and gasoline, related to the production process.

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, cardboard and PE-film. 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.

The glass wool raw material is supplied from three different external locations to all four Ecophon production sites. A representative electricity mix for glass wool production in each country of origin was used. The finished product can be produced in any of Ecophon's four production sites, the split was calculated by mass allocation from production data for year 2019 for all sites involved.

#### 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 38 litres for 100 km
Distance	475 km (based on transports in 2019)
Capacity utilisation (including empty returns)	100% of the capacity in volume
Capacity utilisation (including empty lefutils)	30% of empty returns
Bulk density of transported products (if available)	54 - 98 kg/m³
Volume capacity utilisation factor (if available)	]

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

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,	Packaging waste is 100 % collected and modelled as recovered matter
for energy recovering, disposal	Ceiling panel losses are landfilled

Scenarios used for quantity of product wastage and waste processing are:

#### A5:2 Energy usage

As a general figure the time to install  $1m^2$  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<sup>2</sup> 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, glass wool ceiling panels have no impact (excluding potential energy savings) 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 de-construction and/or dismantling of glass wool ceiling panels take part during the renovation of the building or the demolition of the entire building. In our case, the environmental impact is assumed to be very small and can 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;

The product is considered to be landfilled without reuse, recovery or recycling.

#### C4, Disposal;

The product is assumed to be 100% landfilled.

Parameter	Value/description
Collection process specified by type	1440-2410g of acoustic ceiling (collected with mixed construction waste)
Recovery system specified by type	No reuse, recycling or energy recovery
Disposal specified by type	1080 - 1960g of acoustic ceiling is landfilled
Assumptions for scenario development (e.g. transportation)	Average truck trailer with a 24t payload, diesel consumption 38 litres for 100 km 200 km (distance to landfill)

### Reuse/recovery/recycling potential, D

#### Description of scenarios and additional technical information:

Packaging waste from module A5 is reported in this module as recovered matter.

## **LCA** results

LCA model, aggregation of data and environmental impact are calculated from the GABI SP40 software – mostly Ecoinvent 3.6 datasets and some Gabi datasets.

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

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:  $5.2E \cdot 0.03 = 5.2 \times 10^3 = 0,0052$ .

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

Modules declared, geographical scope, and share of specific data (in GWP indicator) are stated in the following table. For stages A1-A3 (largest contribution to total GWP), the raw materials are modelled with very low amount of generic data – over 90% of the GWP comes from specific data.

	Product phase				truction ss phase Use phase				End of life phase				Resou rce recov ery 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	Al	A2	A3	A4	A5	B1	B2	Β3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	Х	Х	Х	Х	Х	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	MND
Geography	SE, NL, FR, DK, PL, DE, FI, GB, EU, GLO	SE, NL, FR, DK, PL, DE, FI, GB, EU, GLO	SE, DK, PL, FI	GB, EU, GLO	EU, GLO								GB, EU, GLO	GB, EU, GLO	GB, EU, GLO	GB, EU, GLO	-
Specific data		> 90%	-							-	-			•		-	-

## Environmental impact.

_		Enviror	nmental impacts		
Paran	neters		Gedina A	Gedina E	Gedina D/A
		41.40		2,12E+00	
		A1-A3 A4-A5	1,67E+00 1,60E-01	1,71E-01	3,88E+00 2,81E-01
		B1-B7	0.00E+00	0,00E+00	0,00E+00
<b>6</b> 70		C1-C4	2,38E-01	3,33E-01	2,86E-01
		D D	NDA	ND A	NDA
	Global Warming Potential (GWP) -	T ot al A-C	2.06E+00	2.62E+00	4.45E+00
	kg CO₂ equiv /FU	T OI OI A-C	T he global warming pot	ential of a gas refers to	the total contribution
				ting from the emission of of the reference gas, carl assigned a value of 1.	
		A 1-A 3	1,62E-07	2,10E-07	3,88E-07
		A 4-A 5	8,90E-09	1,12E-08	2,01E-08
		B 1-B 7	0,00E+00	0,00E+00	0,00E+00
2		C1-C4	- 2,33E- 16	-3,71E-16	- 2,29E- 16
ש	Ozone Depletion (ODP) kg CF C 11	D	NDA	NDA	NDA
	equiv/FU	T ot al A-C	1,71E-07	2,21E-07 atospheric ozone layer	4,08E-07
		A 1-A 3	caused by the breakdov compounds (chlorofluor		id/or bromine contair which break down w
		A 4-A 5	5,49E-04	6,72E-04	1,12E-03
		B 1-B 7	0,00E+00	0,00E+00	0,00E+00
, <del>-</del>		C1-C4	1,49E-04	1,74E-04	2,21E-04
9	Acidification potential (AP) kg SO <sub>2</sub>	D	NDA	NDA	NDA
	equiv/FU	T ot al A - C	9,18E-03	1,19E-02	2,11E-02
			man-made environment of acidifying substances		
		A 1-A 3	of acidifying substance: for electricit 2,77E-03	s are agriculture and fos y production, heating a 3,46E-03	sil fuel combustion u nd transport. 5,92E-03
		A 4-A 5	of acidify ing substance for electricit 2,77E-03 2,42E-04	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04	sil fuel combustion u nd transport. 5,92E-03 4,08E-04
		A 4-A 5 B 1-B 7	of acidify ing substance: for electricit 2,77E-03 2,42E-04 0,00E+00	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04 0,00E+00	sil fuel combustion u nd transport. 5,92E-03 4,08E-04 0,00E+00
		A 4-A 5 B 1-B 7 C1-C4	of acidifying substance: for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04 0,00E+00 4,32E-04	sil fuel combustion u nd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04
	Eutrophication potential (EP) kg (POJ) <sup>3</sup> . equiv,FU	A 4-A 5 B 1-B 7	of acidify ing substance: for electricit 2,77E-03 2,42E-04 0,00E+00	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04 0,00E+00	sil fuel combustion u nd transport. 5,92E-03 4,08E-04 0,00E+00
*		A4-A5 B1-B7 C1-C4 D T otal A-C	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 NDA 3,32E-03 Excessive enrichment of and the as	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continental sociated adverse biologi	sil fuel combustion u dd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie cal effects.
		A4-A5 B1-B7 C1-C4 D Total A-C	of acidifying substance:	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03	sil fuel combustion u dd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie cal effects. 2,41E-03
		A4-A5 B1-B7 C1-C4 D T otol A-C	of acidifying substance:	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05	sil fuel combustion u dd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie col effects. 2,41E-03 1,53E-04
		A4-A5 B1-B7 C1-C4 D T ord A-C A1-A3 A4-A5 B1-B7	of acidifying substance for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00	sil fuel combustion u dd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie cal effects. 2,41E-03 1,53E-04 0,00E+00
	(PO <sub>d</sub> ) <sup>3</sup> . equiv,FU	A4-A5 B1-B7 C1-C4 D Total A-C A1-A3 A4-A5 B1-B7 C1-C4	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04	sil fuel combustion u d transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie col effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05
	(PO <sub>d</sub> ) <sup>3</sup> . equiv,FU Photochemicd ozone creation	A4-A5 B1-B7 C1-C4 D Total A-C A1-A3 A4-A5 B1-B7 C1-C4 D	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 NDA	sil fuel combustion u d transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie cod effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA
	(PO <sub>d</sub> ) <sup>3</sup> . equiv,FU	A4-A5 B1-B7 C1-C4 D Total A-C A1-A3 A4-A5 B1-B7 C1-C4	of acidifying substance for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 NDA 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 NDA 1,20E-03 Chemical reactions bra	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biolog 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03	sil fuel combustion u dd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie ccl effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T
	(PO <sub>d</sub> ) <sup>3</sup> . equiv,FU Photochemicd ozone creation	A4-A5 B1-B7 C1-C4 D Totd A-C A1-A3 A4-A5 B1-B7 C1-C4 D Totd A-C	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions bra- reaction of nitrogen sunlight to form azo	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 NDA 1,54E-03 sought about by the light cocides with hydrocarbo ne is an example of a ph	sil fuel combustion u dtransport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie ccl effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence of otochemical reaction
	(PO <sub>d</sub> ) <sup>3</sup> . equiv,FU Photochemicd ozone creation	A4-A5 B1-B7 C1-C4 D Tord A-C A1-A3 A4-A5 B1-B7 C1-C4 D Tord A-C	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions brar reaction of nitrogen sunlight to form ozo 1,87E-06	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03 sought about by the light oxides with hy drocarbo ne is an example of a pt 3,00E-06	sil fuel combustion u dtransport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie cal effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence of oto achemical reaction 5,72E-06
	(PO <sub>d</sub> ) <sup>3</sup> - equiv,FU Photochemicd ozone creation (POPC) kgEthene equiv,FU	A4-A5 B1-B7 C1-C4 D Tord A-C A1-A3 A4-A5 D Tord A-C D Tord A-C	of acidifying substance for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions brar reaction of nitrogen sunlight to form azo 1,87E-06 1,17E-07	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d social ed adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03 suight about by the light oxides with hy dirocrabic ne is an example of a ph 3,00E-06 1,73E-07	sil fuel combustion u d transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 ND A 6,69E-03 surfaces with nutrie ccd effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 ND A 2,66E-03 energy of the sun. T ns in the presence of oto chemicd reaction 5,72E-06 3,09E-07
	(PO <sub>d</sub> ) <sup>3</sup> . equiv,FU Photochemicd ozone creation	A4-A5 B1-B7 C1-C4 D Tord A-C A1-A3 B1-B7 C1-C4 D Tord A-C A4-A5 B1-B7	of acidifying substance for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 NDA 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 NDA 1,20E-03 Chemical reactions brac reaction of nitrogen sunlight to form azo 1,87E-06 1,17E-07 0,00E+00	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent d social ed adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 NDA 1,54E-03 sught about by the light axides with hy drocarba ne is an example of a pt 3,00E-06 1,73E-07 0,00E+00	sil fuel combustion u dd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 ND A 6,69E-03 surfaces with nutrie ccl effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 ND A 2,66E-03 energy of the sun. T as in the presence of iotochemical reaction 5,72E-06 3,09E-07 0,00E+00
	(PO <sub>d</sub> ) <sup>3</sup> , equiv/FU Photochemical azone creation (POPC) kg Ethene equiv/FU A biotic depletion potential for non-	A4-A5 B1-B7 C1-C4 D Tord A-C A1-A3 B1-B7 C1-C4 A1-A3 A4-A5 B1-B7 C1-C4	of acidifying substance for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions brar reaction of nitrogen sunlight to form azo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent d social ed adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 NDA 1,54E-03 sught about by the light oxides with hy drocarba ne is an example of a pt 3,00E-06 1,73E-07 0,00E+00 - 1,60E-09	sil fuel combustion u dd transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie ccd effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T as in the presence of iotochemical reaction 5,72E-06 3,09E-07 0,00E+00 1,56E-10
	(PO <sub>d</sub> ) <sup>3</sup> , equiv,FU Photochemical ozone creation (POPC) kg Ethene equiv,FU Abiotic depletion potential for non- fossil resources (ADP-elements) - kg	A4-A5 B1-B7 C1-C4 D TotdA-C A1-A3 A4-A5 B1-B7 C1-C4 A1-A3 A4-A5 B1-B7 C1-C4 D	of acidifying substance for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 NDA 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 NDA 1,20E-03 Chemical reactions brar reaction of nitrogen sunlight to form azo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10 NDA	s are agriculture and fos y production, heating a 3,46E-03 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent a social ed adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 NDA 1,54E-03 bught about by the light axial social social social NDA 1,54E-03 bught about by the light axial social social social NDA	sil fuel combustion und transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie ccl effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence of iotochemical reaction 5,72E-06 3,09E-07 0,00E+00 1,56E-10 NDA
	(PO <sub>d</sub> ) <sup>3</sup> , equiv,FU Photochemical ozone creation (POPC) kg Ethene equiv,FU Abiotic depletion potential for non- fossil resources (ADP-elements) - kg	A4-A5 B1-B7 C1-C4 D TotdA-C A1-A3 A4-A5 B1-B7 C1-C4 D TotdA-C A1-A3 A4-A5 B1-B7 C1-C4 D TotdA-C	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions brac reaction of nitrogen sunlight to form azo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10 ND A 1,99E-06	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03 ought about by the light axial and a photometers 3,00E-06 1,73E-07 0,00E+00 -1,60E-09 ND A 3,17E-06	sil fuel combustion und transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie col effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence o oto chemical reaction 5,72E-06 3,09E-07 0,00E+00 1,56E-10 NDA 6,03E-06
	(PO <sub>d</sub> ) <sup>3</sup> , equiv,FU Photochemical ozone creation (POPC) kg Ethene equiv,FU Abiotic depletion potential for non- fossil resources (ADP-elements) - kg	A4-A5 B1-B7 C1-C4 D Totd A-C A1-A3 A4-A5 B1-B7 C1-C4 D Totd A-C B1-B7 C1-C4 D Totd A-C A1-A3	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions brac reaction of nitrogen sunlight to form azo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10 ND A 1,99E-06 2,36E+01	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 NDA 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 NDA 1,54E-03 wight about by the light oxides with hydrocarba ne is an example of a ph 3,00E-06 1,73E-07 0,00E+00 -1,60E-09 NDA 3,17E-06 3,16E+01	sil fuel combustion und transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie col effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence of iotochemical reaction 5,72E-06 3,09E-07 0,00E+00 1,56E-10 NDA 6,03E-06 5,78E+01
	(PO <sub>d</sub> ) <sup>3</sup> , equiv,FU Photochemical ozone creation (POPC) kg Ethene equiv,FU Abiotic depletion potential for non- fossil resources (ADP-elements) - kg	A4-A5 B1-B7 C1-C4 D Totd A-C A1-A3 A4-A5 B1-B7 C1-C4 D Totd A-C B A1-A3 A4-A5 B1-B7 C1-C4 D Totd A-C	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions for reaction of nitrogen sunlight to form ozo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10 ND A 1,99E-06 2,36E+01 1,45E+00	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03 ought about by the light addes with hydrocarbo ne is an example of a ph 3,00E-06 1,73E-07 0,00E+00 -1,60E-09 ND A 3,17E-06 3,16E+01 1,85E+00	sil fuel combustion und transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie col effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence o oto chemical reaction 5,72E-06 3,09E-07 0,00E+00 1,56E-10 NDA 6,03E-06
	(PO <sub>d</sub> ) <sup>3</sup> , equiv,FU Photochemical ozone creation (POPC) kg Ethene equiv,FU Abiotic depletion potential for non- fossil resources (ADP-elements) - kg	A4-A5 B1-B7 C1-C4 D Tod A-C A1-A3 A4-A5 B1-B7 C1-C4 D Tod A-C A1-A3 B1-B7 C1-C4 D Tod A-C A1-A3 B1-B7 C1-C4 D	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions brar reaction of nitrogen sunlight to form ozo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10 ND A 1,99E-06 2,36E+01 1,45E+00 0,00E+00	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03 ought about by the light coides with hydrocarbo ne is an example of a ph 3,00E-06 1,73E-07 0,00E+00 -1,60E-09 ND A 3,16E+01 1,85E+00 0,00E+00	sil fuel combustion u di transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie col effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence of tot ochemical reaction 5,72E-06 3,09E-07 0,00E+00 1,56E-10 NDA 6,03E-06 5,78E+01 3,22E+00 0,00E+00
	(PO <sub>d</sub> ) <sup>3</sup> , equiv,FU Photochemical ozone creation (POPC) kg Ethene equiv,FU Abiotic depletion potential for non- fossil resources (ADP-elements) - kg	A4-A5 B1-B7 C1-C4 D Totd A-C A1-A3 A4-A5 B1-B7 C1-C4 D Totd A-C B A1-A3 A4-A5 B1-B7 C1-C4 D Totd A-C	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions for reaction of nitrogen sunlight to form ozo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10 ND A 1,99E-06 2,36E+01 1,45E+00	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03 ought about by the light addes with hydrocarbo ne is an example of a ph 3,00E-06 1,73E-07 0,00E+00 -1,60E-09 ND A 3,17E-06 3,16E+01 1,85E+00	sil fuel combustion und transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie col effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence o totochemical reaction 5,72E-06 3,09E-07 0,00E+00 1,55E-10 NDA 6,03E-06 5,78E+01 3,22E+00
	(PO <sub>4</sub> ) <sup>3</sup> - equiv,FU Photochemical azone creation (POPC) kgEthene equiv,FU A biotic depletion potential for non- fossil resources (ADP-elements) - kg Sb equiv,FU	A4-A5 B1-B7 C1-C4 D Tod A-C A1-A3 A4-A5 B1-B7 C1-C4 D Tod A-C A1-A3 B1-B7 C1-C4 D Tod A-C A1-A3 B1-B7 C1-C4 D	of acidifying substances for electricit 2,77E-03 2,42E-04 0,00E+00 3,04E-04 ND A 3,32E-03 Excessive enrichment of and the as 1,04E-03 8,41E-05 0,00E+00 7,38E-05 ND A 1,20E-03 Chemical reactions brar reaction of nitrogen sunlight to form ozo 1,87E-06 1,17E-07 0,00E+00 -6,06E-10 ND A 1,99E-06 2,36E+01 1,45E+00 0,00E+00	s are agriculture and fos y production, heating a 2,60E-04 0,00E+00 4,32E-04 ND A 4,15E-03 waters and continent d sociated adverse biologi 1,34E-03 9,46E-05 0,00E+00 1,04E-04 ND A 1,54E-03 ought about by the light coides with hydrocarbo ne is an example of a ph 3,00E-06 1,73E-07 0,00E+00 -1,60E-09 ND A 3,16E+01 1,85E+00 0,00E+00	sil fuel combustion u di transport. 5,92E-03 4,08E-04 0,00E+00 3,58E-04 NDA 6,69E-03 surfaces with nutrie cod effects. 2,41E-03 1,53E-04 0,00E+00 8,79E-05 NDA 2,66E-03 energy of the sun. T ns in the presence o tot ochemical reaction 5,72E-06 3,09E-07 0,00E+00 1,56E-10 NDA 6,03E-06 5,78E+01 3,22E+00 0,00E+00

		Environin	nental impacts		
Paran	neters		Gedina A	Gedina E	Gedina D/A
		A 1-A 3	1,60E+01	1,86E+01	3,40E+01
*	Use of renewable primary energy	A 4-A 5	1,36E+00	1,45E+00	2,21E+00
E.	excluding renewable primary energy	B 1 - B 7	0,00E+00	0,00E+00	0,00E+00
	resources used as raw materials - MJ /FU	C1-C4	-4,64E-02	-7,96E-02	- 3,87E-02
	/10	D	NDA	NDA	NDA
		T ot al A-C	1,73E+01	1,99E+01	3,62E+01
		A1-A3	1,61E-01	1,86E-01	3,86E-01
		A4-A5	8,03E-03	9,30E-03	1,93E-02
*	Use of renewable primary energy				
	used as raw materials - MJ /FU	B1-B7	0,00E+00	0,00E+00	0,00E+00
		C1-C4	0,00E+00	0,00E+00	0,00E+00
		D	NDA	NDA	NDA
		Total A-C	1,69E-01	1,95E-01	4,05E-01
		A 1-A 3	1,61E+01	1,88E+01	3,44E+01
	T otal use of renewable primary	A 4-A 5	1,37E+00	1,46E+00	2,23E+00
	energy resources (primary energy and primary energy resources used	B1-B7	0,00E+00	0,00E+00	0,00E+00
	as raw materials) - MJ /FU	C1-C4	- 4,64E-02	- 7,96E - 02	- 3,87E-02
		D	NDA	NDA	NDA
		T ot al A-C	1,75E+01	2,01E+01	3,66E+01
			Gedina A	Gedina E	Gedina D/A
		A 1-A 3	2,25E+01	3,10E+01	5,80E+01
	U se of non-renewable primary	A4-A5	1,39E+00	1,82E+00	3,22E+00
	energy excluding non-renewable	B 1 - B 7	0,00E+00	0,00E+00	0,00E+00
	primary energy resources used as	C1-C4	3,70E-01	4,10E-01	5,76E-01
	raw materials - MJ /FU	D	NDA	NDA	NDA
		T ot al A-C	2,42E+01	3,32E+01	6,18E+01
		A 1-A 3	8,23E-01	9,29E-01	1,92E+00
	Use of non-renewable primary	A4-A5	4,21E-02	4,66E-02	9,59E-02
7	energy used as raw materials - MJ /	B1-B7	0,00E+00	0,00E+00	0,00E+00
-	FU	C1-C4	0,00E+00	0,00E+00	0,00E+00
		D	NDA	NDA	NDA
		T ot al A-C	8,65E-01	9,76E-01	2,02E+00
		A1-A3	2,33E+01		
	T ot al use of non-renewable primary			3,19E+01	5,99E+01
	energy resources (primary energy	A 4-A 5	1,43E+00	1,86E+00	3,32E+00
	and primary energy resources used	B1-B7	0,00E+00	0,00E+00	0,00E+00
	as raw materials) - MJ /FU	C1-C4	3,70E-01	4,10E-01	5,76E-01
		D	NDA	NDA	NDA
		Total A-C	2,51E+01	3,42E+01	6,38E+01
			Gedina A	Gedina E	Gedina D/A
		41.42	( ( 45 0)	7 (05 0)	1 405 100
		A1-A3	6,64E-01	7,68E-01	1,48E+00
6	Use of secondary material	A 4-A 5	3,57E-02	3,88E-02	7,40E-02
9	Kg/FU	B1-B7	0,00E+00	0,00E+00	0,00E+00
		C1-C4	0,00E+00	0,00E+00	0,00E+00
		D	NDA	NDA	NDA
		T ot al A-C	7,00E-01	8,07E-01	1,55E+00
			Gedina A	GedinaE	Gedina D/A
	Use of second 11	A1-A3	0,00E+00	0,00E+00	0,00E+00
	Use of renewable secondary fuels MJ/FU	A 4-A 5	0,00E+00	0,00E+00	0,00E+00
9		B 1 – B 7	0,00E+00	0,00E+00	0,00E+00
		C1-C4	0,00E+00	0,00E+00	0,00E+00
		D	NDA	NDA	NDA
		T ot al A-C	0,00E+00	0,00E+00	0,00E+00
			Gedina A	Gedina E	Gedina D/A
		41.40			
	Use of see second U	A 1-A 3	0,00E+00	0,00E+00	0,00E+00
5	Use of non-renewable secondary fuels - MJ /FU	A 4-A 5	0,00E+00	0,00E+00	0,00E+00
		B 1 – B 7	0,00E+00	0,00E+00	0,00E+00
		C1-C4	0,00E+00	0,00E+00	0,00E+00
		D	NDA	NDA	NDA
		T ot al A-C	0,00E+00	0,00E+00	0,00E+00
			Gedina A	Gedina E	Gedina D/A
		A 1-A 3	2,74E-02	3,54E-02	6,77E-02
0	Use of net fresh water m³/FU	A 4-A 5	1,53E-03	1,92E-03	3,53E-03
J	m /10	B 1 - B 7	0,00E+00	0,00E+00	0,00E+00
		C1-C4	- 6,96E-06	- 3,22E- 05	1,79E-05
		D	NDA	NDA	NDA

### Waste categories

	Enviror	nmental impacts		
Parameters		Gedina A	Gedina E	Gedina D/A
	A 1-A 3	1,60E-08	1,84E-08	3,46E-08
<b>—</b>	A 4-A 5	1,42E-09	1,50E-09	2,30E-09
Hazardous waste disposed	B 1-B 7	0,00E+00	0,00E+00	0,00E+00
▲ kg/FU	C1-C4	1,63E-11	1,37E-11	3,04E-11
	D	NDA	NDA	NDA
	T otal A-C	1,74E-08	1,99E-08	3,69E-08
		Gedina A	Gedina E	Gedina D/A
	A 1-A 3	2,17E-01	2,42E-01	5,85E-01
Non-hazardous waste	A 4-A 5	9,06E-02	8,35E-02	1,39E-01
disposed - kg/FU	B 1-B 7	0,00E+00	0,00E+00	0,00E+00
0	C1-C4	1,26E+00	1,37E+00	1,98E+00
	D	NDA	NDA	NDA
	T ot al A-C	1,57E+00	1,70E+00	2,70E+00
		Gedina A	Gedina E	Gedina D/A
	A 1-A 3	5,91E-05	6,53E-05	7,41E-05
R adioactive waste disposed	A 4-A 5	- 3,37E-06	- 1,68E-06	- 3,42E-06
kg/FU	B 1-B 7	0,00E+00	0,00E+00	0,00E+00
	C1-C4	- 2,56E- 05	- 3,78E-05	- 2,85E-05
	D	NDA	NDA	NDA

### Output flow

Environmental impacts							
Parameters		Gedina A	Gedina E	Gedina D/A			
Components for re-use kgf U	A 1-A 3	-		-			
	A 4-A 5			-			
	B 1-B 7			-			
	C1-C4			-			
	D	NDA	NDA	NDA			
	T ot al A - C	-	-	-			
Materials for recycling kg/F U		Gedina A	Gedina E	Gedina D/A			
	A 1-A 3	2,02E-02	2,26E-02	4,17E-02			
	A 4-A 5	1,05E-02	1,23E-02	1,66E-02			
	B 1-B 7	0,00E+00	0,00E+00	0,00E+00			
	C1-C4	0,00E+00	0,00E+00	0,00E+00			
	D	NDA	NDA	NDA			
	T ot al A-C	3,07E-02	3,49E-02	5,83E-02			
Materials for energy reovery - kg/FU		Gedina A	Gedina E	Gedina D/A			
	A 1-A 3	-	-	-			
	A 4-A 5	-	-	-			
	B 1-B 7	-	-	-			
	C1-C4	-	-	-			
	D	NDA	NDA	NDA			
	T ot al A-C	-	-	-			
Exported energy M J,F U		Gedina A	Gedina E	Gedina D/A			
	A 1-A 3	0,00E+00	0,00E+00	0,00E+00			
	A 4-A 5	0,00E+00	0,00E+00	0,00E+00			
	B 1-B 7	0,00E+00	0,00E+00	0,00E+00			
	C1-C4	0,00E+00	0,00E+00	0,00E+00			
	D	NDA	NDA	NDA			
	T ot al A-C	-		-			

### Summary

	Gedina A	Gedina E	Gedina D/A
Global warming kg CO <sub>2</sub> equiv/FU	2,06	2,62	4,45
Non-renewable resources consumption [1]	25	34	62
Energy consumption [2] MJ/FU	43	54	100
Water consumption [3] m <sup>3</sup> /FU	0,03	0,04	0,07
Waste production [4]	1,57	1,70	2,70

- [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**

ISO 354:2003: Acoustics - Measurement of sound absorption in a reverberation room

Finnish M1: Emission classification of building materials (M1 Classification): general instructions 12 November 2014

Eurofins Indoor Air Comfort: Eurofins Indoor Air Comfort GOLD and Indoor Air Comfort Version 7.0 May 2020

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

LCA report: Project\_report\_on\_Ecophon\_LCA\_2021-03-03

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

Acoustical systems solutions (sub-oriented PCR; appendix to PCR 2012:01) - previously Acoustic ceilings.

PCR 2012:01 Construction products and construction services (version 2.32 dated 2020-07-01)

## **Difference from previous versions**

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

# **CONTACT INFORMATION**

LCA author and EPD owner



Saint-Gobain Ecophon AB Box 500 265 03 Hyllinge Sweden

Markus Beckman markus.beckman@ecophon.se

Programme operator



EPD International AB Box 210 60 100 31 Stockholm Sweden info@environdec.com