

# Environmental Product Declaration



In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

## **COMMERCIALISED ACOUSTIC ANTI-IMPACT INSULATORS AIR-BUR IMPACTO**

By **BUR2000 S.A.U.**



Programme:

Programme operator:

EPD registration number:

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## General information

### Programme information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
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The CEN EN 15804 standard serves as the basis for the Product Category Rule (PCR)
Product Category Rules (PCR): <i>PCR 2019:14 Construction Products (EN 15804+A2), version 1.11</i> <i>PCR 2019:14-c-PCR-014 Acoustical ceiling and wall solutions (2022-01-28)</i>
PCR review was conducted by: <i>El Technical Committee of the International EPD® System</i> President: <i>Claudia A. Peña</i> . Contact via <i>info@environdec.com</i>
Independent third-party verification of the declaration and data, according to ISO 14025:2006:  <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier: <i>TECNALIA R&amp;I SL</i> Verifier: <i>Cristina Gazulla Santos</i> Accredited by: ENAC. Accreditation nº 125/C-PR283
Procedure for follow-up of data during EPD validity involves third party verifier:  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: BUR2000 S.A.U., Camí Sagraments 34, Pol. Sant Ermengol, 08630 Abrera, Barcelona, España.

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Description of the organisation: Bur2000, S.A.U is a company dedicated to the manufacturing, marketing and distribution of thermal, acoustic and anti-impact insulation systems for installations in new homes, as well as renovations.

Bur2000 products allow to reduce energy demand in buildings, increasing comfort and offering protection against exterior cold, heat and noises.

We cover all clients' needs to execute a comprehensive reform as indicated in the following products: Thermal Insulation, Acoustic Insulation, Anti-impact Insulation.

### Product-related certifications:

- Certification UNE-EN ISO 14021:2016 Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)

In addition, BUR2000 products comply with the following standards:

- ASTM global standards
- EOTA technical assessment
- Technical Building Code CTE
- UNE-EN ISO 140-8:1998 Acoustics. Measurement of sound insulation in buildings and of building elements. Part 8: Laboratory measurements of the reduction of transmitted impact noise by floor coverings on a heavyweight standard floor. (ISO 140-8:1997).
- UNE-EN ISO 717-1:2013 Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation (ISO 717-1:2013)

Production site: Turkey

## Products information

Products' names: **Air-Bur Reticulado 5 mm, Air-Bur Reticulado 10 mm, Air-Bur Sound 2 mm, Air-Bur Sound 3 mm and Air-Bur Sound 5 mm**

Products' identification: This EPD represents anti-impact acoustic insulation, of both cross-linked polyethylene foam and ethyl vinyl acetate foam for interior and exterior installation, plates and thermal bridges. This range of thermal-acoustic insulation from BUR2000 is intended to provide comprehensive thermal-acoustic insulation solutions for the different elements of interest in new and refurbished works, complying with the requirements of the Technical Building Code.

UN CPC Code: 369 Other plastic products.

Product description: The description and technical characteristics of the mentioned products are detailed below:

**Air-Bur Reticulado 5 mm y Air-Bur Reticulado 10 mm:** Closed-cell cross-linked polyethylene foam sheet with an elastic internal structure and high compressive strength, 5 mm and 10 mm thick, respectively.



**Air-bur Sound 2 mm, Air-bur Sound 3 mm y Air-bur Sound 5 mm:** Recycled rubber sheet (EVA) with thicknesses of 2 mm, 3 mm and 5 mm, as their names indicate. Its mechanical properties offer excellent acoustic insulation against impact noise.



These anti-impact isolator systems are recommended for horizontal installation. The demo is listed below:



Table 1. Properties and technical characteristics of BUR2000 anti-impact insulators

AIR-BUR IMPACTO		Applied test standard	Air-Bur Reticulado 5 mm	Air-Bur Reticulado 10 mm	Air-bur Sound 2 mm	Air-bur Sound 3 mm	Air-bur Sound 5 mm
Physical properties (+/- 5%)	Thickness (mm)	EN 823	5	10	2	3	5
	Weight (g/m <sup>2</sup> )	EN 1602	140	280	220	330	550
	Density (kg/m <sup>3</sup> )	Not applicable	27	27	110		
Acoustic properties	Impact noise improvement (dB)	ISO 717-2	25,5	28	-	-	-
	Acoustic insulation (dB)	UNE EN-ISO 140-8	-	-	22		
	Acoustic insulation (dB)	UNE EN-ISO 717-1	-	-	56		
Other properties	Dynamic stiffness (MN/m <sup>3</sup> )	EN 29052-1	60	32	12		
	Specific heat capacity (kg)	ISO 22007	-	-	0,24		
	Transverse elongation at break (%)	EN 12310-1	-	-	51		
	Resistance to Compression 25% (kPa)	EN 826:1999	57			97	
	Water absorption (%)	EN ISO 12572	-			0,01	
	Remaining deformation (%)	EN 826:1999	-3			-	-
	Reaction to fire (Euro class)	EN 13501-1	F			-	-
	Thermal conductivity (W/m <sup>2</sup> K)	EN ISO 16012:2012	0,04			0,037	0,037

	<b>Thermal resistance (m2k/W)</b>	EN ISO 16012:2012	0,125	0,25	0,054	0,081	0,135
	<b>Work temperature</b>	Not applicable	-80°C a +100°C		< 80°C		
	<b>Water permeability (WS-1)</b>	EN ISO 12572	3600		-	-	-
	<b>Resistance to water vapour (g/mq)</b>	EN ISO 12572	118		-	-	-
	<b>Impermeability</b>	EN ISO 12572	Sí		-	-	-
	<b>Vapour barrier</b>	EN ISO 12572	Sí		-	-	-
<b>Recommended uses</b>	<b>Horizontal facing</b>	Not applicable	Floor, floating floor		Platform, floating floor, under platform, vinyl floor and PVC	Floating floors, PVC, under platform, laminate under flooring	Platform, floating floor, PVC

## LCA information

Functional unit: The functional unit defines the way in which the functions identified by the performance characteristics (capability) of the product are quantified. This is a reference by which material flows, Life Cycle Analysis (LCA) results and any other information are normalized. This allows for the comparison with any other product system that has been evaluated with the same functional unit.

According to UNE-EN 15804:2012+A2:2019, in the case of a construction product, the following must be specified: the application of the product, the magnitude (quantity) of reference, the key properties quantified under the defined conditions, and a specified period of time.

In this case, the manufacturing, distribution, installation, use and end of life of one square meter (1 m<sup>2</sup>) of AIR-BUR IMPACT manufactured products with the main function as an in-situ acoustic insulation system in buildings have been chosen as the functional unit for a useful life of 20 years. The values of acoustic performance, thickness (mm), weight (gr) and the applications of each product reference corresponding to this unit are collected in the following tables:

Table 2. Values of acoustic performance, thickness, weight and applications corresponding to one square meter of Air-bur Impacto

AIR-BUR IMPACTO		Applied test standard	Air-Bur Reticulado 5 mm	Air-Bur Reticulado 10 mm	Air-bur Sound 2 mm	Air-bur Sound 3 mm	Air-bur Sound 5 mm
Physical properties (+/- 5%)	Thickness (mm)	EN 823	5	10	2	3	5
	Weight (g/m2)	EN 1602	140	280	220	330	550
Acoustic properties	Impact noise improvement (dB)	ISO 717-2	25,5	28	-	-	-
	Acoustic insulation (dB)	UNE EN-ISO 140-8	-	-	22		
	Acoustic insulation (dB)	UNE EN-ISO 717-1	-	-	56		
Application area: in buildings		C-PCR-014	Ceiling, roof, floor				



Reference service life (RSL): the RSL of the products is considered to be 20 years, according to the company's experience and the guarantee offered to the client.

Temporal and geographical representativeness: Primary data comes from the factory located in Turkey, of the year 2021, being representative for the products studied and the production process.

Regarding the market area, the products are mainly marketed within Europe.

This document will be used for B2B communication, with a global scope.

Data quality:

Specific data has been taken on the amounts of materials and energy used during the life cycle of the product. These data have been supplied by BUR2000, referring to the year 2021, and come from direct factory data.

Generic data have been taken on the impact per unit of matter or energy. These data have been obtained from the Ecoinvent database, of recognized international prestige, in its version 3.8. Said database has been selected as the reference database because it coincides with the input flows of matter and energy on the following aspects:

- Technological equivalence: the data derives from the same physical and chemical processes, or at least the same technological coverage.
- Limits towards nature: the data contains all the quantitative information necessary for the EPD®.
- Limits towards technical systems: the considered stages of the life cycle are equivalent.

The treatment and processing of the data has been carried out in accordance with the international standards ISO 14025, ISO 14040, ISO 14044 and UNE-EN 15804: 2012 + A2: 2019.

Database and LCA software used: The Simapro 9.3 calculation software and the Ecoinvent 3.8 database were used for the development of this study.

Description of system limits: The presented EPD® is structured by the stages of the life cycle established according to the reference standard PCR: Construction products and construction services, based on UNE-EN 15804 regulations. This EPD® is from cradle to grave with module D (A+B+C+D).

The life cycle stages analysed are described below:

### **A1-A3 Product stage**

The product stage is made up of the stages of supply of raw materials (A1), transport of raw materials (A2) and manufacturing (A3). As permitted by UNE-EN 15804 regulations, the results of stages A1-A3 have been grouped into a single product stage (A).

### **A1- Supply of materials**

This module takes into account the acquisition of both raw and prefabricated materials that make up the products.

## A2- Transportation of raw materials

This module includes the transport of the different materials from the supplier in Turkey to BUR2000 centre in Abrera, Barcelona for storage. The distance and type of truck and specific ship for each raw material have been introduced.

## A3- Manufacturing

This module includes the energy consumption and packaging materials used during the manufacturing process of BUR2000 acoustic insulators. At the same time, the emissions generated by the transport and management of waste originating in the plant (as well as production losses, managed externally to the production centre) are analysed.

The electrical energy consumed in the production plant is from sources without CO<sub>2</sub> emissions, according to the supplier's information. Regarding anti-impact thermoacoustic insulation systems, BUR2000 performs the role of redistributor. The electrical consumption of each product reference is, therefore, the general electrical consumption of the factory (lighting, air conditioning, etc.). To calculate it, the difference between the invoiced electricity and the electricity demand for the sum of machinery has been used, dividing this difference by the total number of products (in m<sup>2</sup>), both manufactured and stored in the plant. In this way, the general electrical consumption is the same for all the references studied.

## A4-A5 Construction stage

The Construction Process stage is made up of modules A4 Distribution and A5 Construction-Installation Process.

The **A4 Distribution** module includes the transport of the finished and packaged products from the factory gate to the construction site for subsequent installation.

The mileage associated with each product has been considered based on its sales during the year 2021.

PARAMETER	VALUE EXPRESSED PER FUNCTIONAL UNIT
<b>Fuel's type and consumption, type of vehicles used for transportation. For example: long-distance truck, ship, etc.</b>	<ul style="list-style-type: none"> <li>Transport van 3,5 – 7 tn EURO5. Diesel consumption: 0,109 kg/tkm</li> <li>Small truck 7,5-16 tn EURO5. Diesel consumption: 0,047 kg/tkm</li> <li>Medium truck 16-32 tn EURO5. Diesel consumption: 0,037 kg/tkm</li> </ul>
<b>Distance</b>	<ul style="list-style-type: none"> <li>Van: 24 km</li> <li>Small truck: 583 km</li> <li>Big truck: 556 km</li> </ul>
<b>Capacity utilization (including empty return trip)</b>	% assumption from Ecoinvent
<b>Apparent density of transported product</b>	Varying between 27 and 110 kg/m <sup>3</sup>
<b>Useful Capacity Factor</b>	1

Module **A5 Installation Process** includes all materials and energy used to prepare the products for use. At the same time, the transport and management of packaging wastes and their transport to a local waste manager is taken into account.

At this stage, 0% losses are considered. Installation is done manually, so the energy consumption value is 0. The consumption of aluminized polyester adhesive tape to seal the joint between sheets is taken into account.

In the management of packaging waste, the most up-to-date treatment scenario of Eurostats (2019) is considered. Between treatments, the final disposal takes place in a controlled landfill within a radius of 50 km.

PARAMETER	DESCRIPTION	VALUE PER FUNCTIONAL UNIT
Auxiliary materials for installation	Aluminized polyester adhesive tape (m)	0,5 m
Use of water	m3	0
Use of other resources	Not applicable	0
Quantitative description of the type of energy (regional mix) and consumption during the installation process	Not applicable	0
Direct emissions to air, water and land	kg	0
Waste materials on site, before waste processing, generated by the installation of the product; specified by type	Installation losses	0%
	Packaging (kg)	0,131 kg (average value)
Outflow of materials (specified by type) resulting from the processing of waste on the construction site, for example, during collection for recycling, energy recovery (valorisation) or dumping (specifying the route)	Recycled	0
	Landfilled	Packaging waste: 0,131 kg (average value)

### B1-B7 Use stage

This stage is made up of **B1 Use**, **B2 Maintenance**, **B3 Repair**, **B4 Substitution**, **B5 Rehabilitation**, **B6 Use of energy in service** and **B7 Use of water in service**.

Once the installation is complete, no technical actions or operations are required during the use stages until end of life. Therefore, BUR2000 acoustic anti-impact insulators have no impact (excluding potential energy savings) at this stage.

### C1-C4 End-of-life stage

This stage includes the following end-of-life activities of the products: **C1 Dismantling/Deconstruction**, **C2 Transport to the waste manager**, **C3 Waste treatment** and **C4 Final disposal**.

Included are the provision of all transportation, materials, products, and the related use of energy and water. The impact of the manual dismantling of the insulation is considered very small compared to the impact of the deconstruction of the building as a whole and can be neglected in C1.

Although BUR2000 products are recyclable indefinitely and are partially recycled at the end of their useful life, there is not yet an established collection system in all member countries. Therefore, the assumption chosen in this study is 100% landfill (C4), being the most conservative approach.

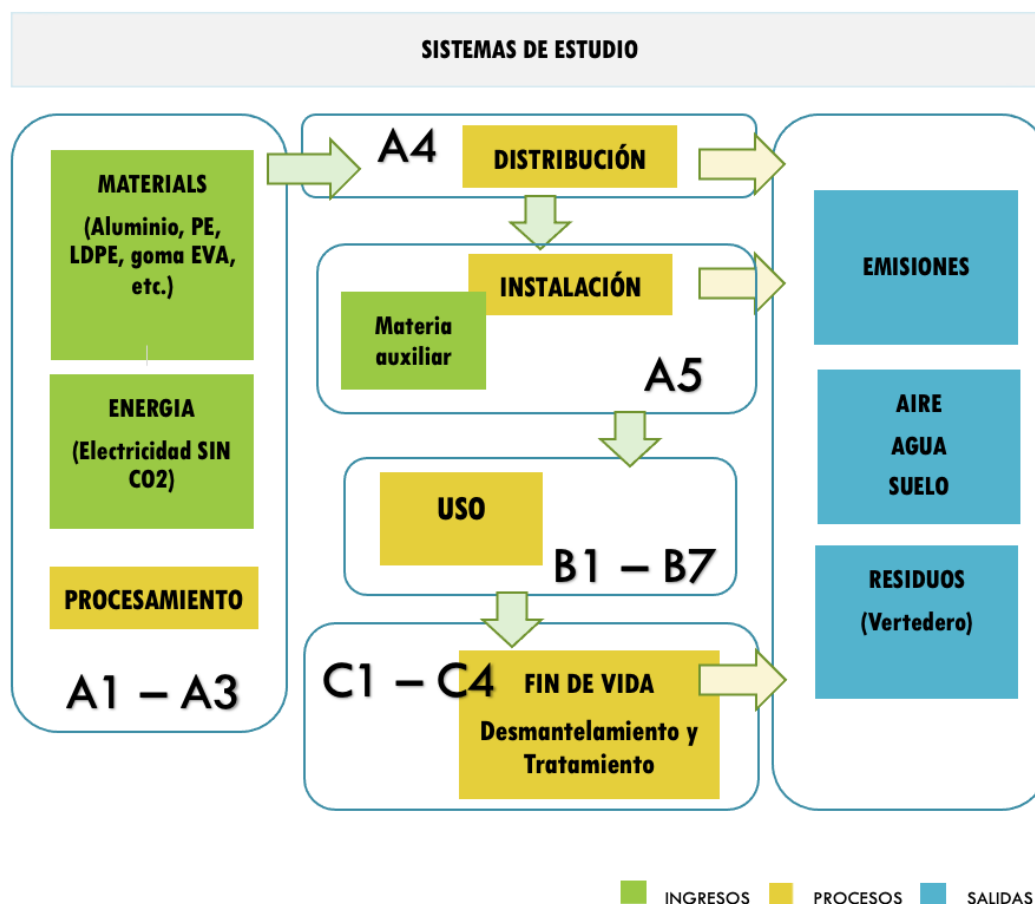
The following table summarizes the information necessary for the end-of-life stage:

Module	Parameter	Unit (expressed per functional unit)	Average value
<b>C1 Dismantling</b>	Process of collection specified by type	Kg collected manually and separately	0
		Kg collected mixed with construction waste	0,244 kg (average value)
<b>C2 Transportation</b>	Fuel type and consumption, type of vehicles used for the transport	Truck 16 t EURO5	Diesel consumption: 0,037 kg/tkm
	Distance	km	100
	Capacity use	% assumption by Ecoinvent	100% volume outbound trip
	Useful capacity factor		1
<b>C3 Waste treatment</b>	System recovery specified by type	Kg for reuse	0
		Kg for recycle	0
		Kg for energy recovery	0
<b>C4 Final disposal</b>	Disposal specified by type	Kg for elimination	Total 0,244 kg (average value)

## D Reuse, Recovery and Recycling Potential

These products do not claim environmental benefits due to recycling and/or reuse.

System diagram:



More information: <https://www.bur2000.com/>

Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

	Product Stage			Construction stage		Use stage							End-of-life stage				Benefits
	Raw materials	Transportation	Fabrication	Distribution	Installation/construction	Use	Maintenance	Reparation	Replacement	Rehabilitation	Energy use	Water use	Deconstruction-demolition	Transport	Waste treatment	Waste elimination	Reutilization, recuperation and recycle potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Declared modules	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	GLO	GLO	GLO	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Specific data	> 95% GWP-GHG					-	-	-	-	-	-	-	-	-	-	-	-
Product variation	Less than 10% for each product group					-	-	-	-	-	-	-	-	-	-	-	-
Site variation	NR			-	-	-	-	-	-	-	-	-	-	-	-	-	-

NR = Not relevant

## Additional information

- Technical support for the implementation of the EPD: Marcel Gómez Consultoría Ambiental.
- As indicated previously, for the range of anti-impact thermal-acoustic insulation BUR2000 acts as a redistributor. Therefore, energy consumption and manufacturing materials are reflected in stage A1. The electrical mix used in the simulation of the production process is the Turkish mix. Stage A2 includes the transport of the manufactured products from Turkey to the BUR2000 warehouse in Abrera, Barcelona. Stage A3 counts the general electrical consumption in the BUR2000 plant.
- Cut-off rules and considerations:
  - 95% of all the mass and energy inputs and outputs of the central system have been included, identified in the life cycle inventory included in this report and at least 99% for the total life cycle.
  - The principle of modularity has been followed, as well as the polluter-payer principle.
- Allocation procedure: whenever possible, allocation has been avoided, but for general electricity consumption and waste production an allocation has had to be made based on physical mass considerations.
- Based on the system boundaries indicated in the reference regulation PCR Construction products and construction services, the following processes have not been taken into account:
  - The manufacture of capital goods with an expected life of more than three years, buildings and other capital assets.
  - Maintenance activities of the production plant.
  - Research and development activities.
  - Transportation of personnel on the home-factory-home route.
  - Long-term emissions.
- The scenarios included are currently in use and are representative of one of the most likely alternatives for the product under review.

## Content information

The presented BUR2000 acoustic insulations have variable composition. Due to confidentiality issues, this table presents the information on the variation range of the content of the product references studied:

Raw material	Percentage, %	Post-consumer material, weight-%	Renewable material, weight-%
PE foam	0-100%	0	0
EVA rubber	0-100%	0	0
TOTAL	0,14-0,43 kg		
Packaging Materials	Weight, kg	Weight-% (versus product)	Post-consumer material, weight-%
Polyethylene film, bag and label	0-0,003	0-1,4%	0
Cardboard tube	0-0,017	0-3,6%	0
Galvanized steel strap	0-8,43E-05	0-0,01%	0
Wooden pallet	0,001-0,013	0,8-9,8%	0
TOTAL	0-0,086	0-13,4%	

The products studied do not include during their life cycle any dangerous substance included in the list of "Substances of Very High Concern" for Authorization (SVHC) in a percentage greater than 0,1% of the weight of the product.

## Environmental information

Information on environmental impacts is expressed with Life Cycle Impact Assessment (LCIA) impact category indicators using characterization factors in an LCIA according to ISO 14044. Information on impact categories, indicators, characterization methods, units and characterization factors to be applied is in accordance with what is indicated in Annex C of EN 15804+A2.

The additional impact categories of table 4 of EN 15804+A2 are presented within the LCA report and are not declared in this EPD.

The results of the potential environmental impact of the products studied are presented below:



## Group 1

These results are valid for the following product: Air-bur Reticulado 5 mm

### Potential environmental impact: mandatory indicators according to EN 15804

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceeding threshold values, safety margins, or risks.

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	4,26E-01	1,03E-02	1,25E-01	0	0	0	0	0	0	0	0	0	0	1,62E-02	0
GWP-biogenic	kg CO <sub>2</sub> eq.	9,42E-04	4,04E-06	2,41E-04	0	0	0	0	0	0	0	0	0	0	1,45E-06	0
GWP-luluc	kg CO <sub>2</sub> eq.	6,36E-04	4,71E-06	2,05E-04	0	0	0	0	0	0	0	0	0	0	1,66E-06	0
GWP-total	kg CO <sub>2</sub> eq.	4,28E-01	1,03E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	1,62E-02	0
ODP	kg CFC 11 eq.	2,26E-08	2,33E-09	8,43E-09	0	0	0	0	0	0	0	0	0	0	4,44E-10	0
AP	mol H <sup>+</sup> eq.	2,02E-03	4,11E-05	7,82E-04	0	0	0	0	0	0	0	0	0	0	1,32E-05	0
EP-fresh water	kg P eq.	1,18E-04	7,55E-07	4,26E-05	0	0	0	0	0	0	0	0	0	0	2,43E-07	0
EP-marine	kg N eq.	4,14E-04	1,21E-05	1,24E-04	0	0	0	0	0	0	0	0	0	0	2,95E-04	0
EP-terrestrial	mol N eq.	4,35E-03	1,32E-04	1,35E-03	0	0	0	0	0	0	0	0	0	0	4,79E-05	0
POCP	kg NMVOC eq.	3,13E-03	4,05E-05	4,33E-04	0	0	0	0	0	0	0	0	0	0	1,71E-05	0
ADP-minerals&metals*	kg Sb eq.	2,68E-06	4,50E-08	3,18E-06	0	0	0	0	0	0	0	0	0	0	5,14E-09	0
ADP-fossil*	MJ	1,24E+01	1,54E-01	1,88E+00	0	0	0	0	0	0	0	0	0	0	3,52E-02	0
WDP*	m <sup>3</sup>	2,85E-01	4,87E-04	5,31E-02	0	0	0	0	0	0	0	0	0	0	1,50E-03	0
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; 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; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Potential environmental impact: additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	4,14E-01	1,02E-02	1,22E-01	0	0	0	0	0	0	0	0	0	0	1,40E-02	0

## Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	7,44E+00	1,62E-01	1,99E+00	0	0	0	0	0	0	0	0	0	0	3,71E-02	0
PERM	MJ	2,40E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	7,68E+00	1,62E-01	1,99E+00	0	0	0	0	0	0	0	0	0	0	3,71E-02	0
PENRE	MJ	1,33E+01	3,76E-03	1,03E-01	0	0	0	0	0	0	0	0	0	0	9,45E-04	0
PENRM	MJ.	6,34E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	1,97E+01	3,76E-03	1,03E-01	0	0	0	0	0	0	0	0	0	0	9,45E-04	0
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	5,78E-03	1,79E-05	1,39E-03	0	0	0	0	0	0	0	0	0	0	3,60E-05	0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

<sup>1</sup> The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

## Waste production and output flows

### Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Non-hazardous waste disposed	kg	4,12E-02	6,83E-03	2,91E-02	0	0	0	0	0	0	0	0	0	0	1,38E-01	0
Hazardous waste disposed	kg	4,50E-06	4,11E-07	1,89E-05	0	0	0	0	0	0	0	0	0	0	5,34E-08	0
Radioactive waste disposed	kg	1,95E-05	1,04E-06	4,01E-06	0	0	0	0	0	0	0	0	0	0	2,07E-07	0

### Output flows

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material for recycling	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### Information on biogenic carbon content.

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in the product	kg C	0,00E+00
Biogenic carbon content in the packaging	kg C	6,67E-03

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>

## Group 2

These results are valid for the following product: Air-bur Sound 2 mm

### Potential environmental impact: mandatory indicators according to EN 15804

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceeding threshold values, safety margins, or risks.

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	5,68E-01	1,64E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	2,08E-02	0
GWP-biogenic	kg CO <sub>2</sub> eq.	1,22E-03	6,42E-06	2,41E-04	0	0	0	0	0	0	0	0	0	0	1,87E-06	0
GWP-luluc	kg CO <sub>2</sub> eq.	5,83E-04	7,49E-06	2,05E-04	0	0	0	0	0	0	0	0	0	0	2,13E-06	0
GWP-total	kg CO <sub>2</sub> eq.	5,70E-01	1,64E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	2,08E-02	0
ODP	kg CFC 11 eq.	2,69E-08	3,71E-09	8,52E-09	0	0	0	0	0	0	0	0	0	0	5,71E-10	0
AP	mol H <sup>+</sup> eq.	2,60E-03	6,54E-05	7,84E-04	0	0	0	0	0	0	0	0	0	0	1,70E-05	0
EP-fresh water	kg P eq.	1,34E-04	1,20E-06	4,26E-05	0	0	0	0	0	0	0	0	0	0	3,12E-07	0
EP-marine	kg N eq.	5,35E-04	1,92E-05	1,25E-04	0	0	0	0	0	0	0	0	0	0	3,79E-04	0
EP-terrestrial	mol N eq.	5,53E-03	2,09E-04	1,36E-03	0	0	0	0	0	0	0	0	0	0	6,15E-05	0
POCP	kg NMVOC eq.	1,97E-03	6,43E-05	4,35E-04	0	0	0	0	0	0	0	0	0	0	2,20E-05	0
ADP-minerals&metals*	kg Sb eq.	3,86E-06	7,15E-08	3,18E-06	0	0	0	0	0	0	0	0	0	0	6,60E-09	0
ADP-fossil*	MJ	1,49E+01	2,45E-01	1,89E+00	0	0	0	0	0	0	0	0	0	0	4,53E-02	0
WDP*	m <sup>3</sup>	4,31E-01	7,74E-04	5,34E-02	0	0	0	0	0	0	0	0	0	0	1,92E-03	0
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; 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; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Potential environmental impact: additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>2</sup>	kg CO <sub>2</sub> eq.	5,52E-01	1,62E-02	1,23E-01	0	0	0	0	0	0	0	0	0	0	1,80E-02	0

## Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1,49E+00	4,02E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	9,28E-04	0
PERM	MJ	3,00E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	1,52E+00	4,02E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	9,28E-04	0
PENRE	MJ	1,60E+01	2,60E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	4,81E-02	0
PENRM	MJ.	6,91E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	2,29E+01	2,60E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	4,81E-02	0
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	1,06E-02	2,85E-05	1,40E-03	0	0	0	0	0	0	0	0	0	0	4,63E-05	0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

<sup>2</sup> The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

## Waste production and output flows

### Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Non-hazardous waste disposed	kg	5,32E-02	1,09E-02	7,13E-02	0	0	0	0	0	0	0	0	0	0	1,78E-01	0
Hazardous waste disposed	kg	4,52E-06	6,54E-07	1,89E-05	0	0	0	0	0	0	0	0	0	0	6,85E-08	0
Radioactive waste disposed	kg	1,55E-05	1,65E-06	4,05E-06	0	0	0	0	0	0	0	0	0	0	2,66E-07	0

### Output flows

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material for recycling	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### Information on biogenic carbon content.

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in the product	kg C	0,00E+00
Biogenic carbon content in the packaging	kg C	2,42E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>

### Group 3

These results are valid for the following product: Air-bur Reticulado 10 mm

### Potential environmental impact: mandatory indicators according to EN 15804

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceeding threshold values, safety margins, or risks.

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	7,52E-01	4,49E-02	1,27E-01	0	0	0	0	0	0	0	0	0	0	3,14E-02	0
GWP-biogenic	kg CO <sub>2</sub> eq.	1,60E-03	1,76E-05	2,42E-04	0	0	0	0	0	0	0	0	0	0	2,82E-06	0
GWP-luluc	kg CO <sub>2</sub> eq.	8,13E-04	2,05E-05	2,07E-04	0	0	0	0	0	0	0	0	0	0	3,21E-06	0
GWP-total	kg CO <sub>2</sub> eq.	7,54E-01	4,49E-02	1,28E-01	0	0	0	0	0	0	0	0	0	0	3,14E-02	0
ODP	kg CFC 11 eq.	3,23E-08	1,01E-08	9,14E-09	0	0	0	0	0	0	0	0	0	0	8,62E-10	0
AP	mol H <sup>+</sup> eq.	3,47E-03	1,79E-04	7,98E-04	0	0	0	0	0	0	0	0	0	0	2,57E-05	0
EP-fresh water	kg P eq.	2,03E-04	3,29E-06	4,27E-05	0	0	0	0	0	0	0	0	0	0	4,71E-07	0
EP-marine	kg N eq.	6,69E-04	5,25E-05	1,30E-04	0	0	0	0	0	0	0	0	0	0	5,72E-04	0
EP-terrestrial	mol N eq.	6,99E-03	5,73E-04	1,41E-03	0	0	0	0	0	0	0	0	0	0	9,29E-05	0
POCP	kg NMVOC eq.	5,53E-03	1,76E-04	4,51E-04	0	0	0	0	0	0	0	0	0	0	3,33E-05	0
ADP-minerals&metals*	kg Sb eq.	4,54E-06	1,96E-07	3,18E-06	0	0	0	0	0	0	0	0	0	0	9,96E-09	0
ADP-fossil*	MJ	2,27E+01	6,72E-01	1,93E+00	0	0	0	0	0	0	0	0	0	0	6,84E-02	0
WDP*	m <sup>3</sup>	5,05E-01	2,12E-03	5,53E-02	0	0	0	0	0	0	0	0	0	0	2,90E-03	0
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; 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; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Potential environmental impact: additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>3</sup>	kg CO <sub>2</sub> eq.	7,30E-01	4,45E-02	1,24E-01	0	0	0	0	0	0	0	0	0	0	2,72E-02	0

## Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	7,79E+00	1,10E-02	1,31E-01	0	0	0	0	0	0	0	0	0	0	1,40E-03	0
PERM	MJ	2,40E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	8,03E+00	1,10E-02	1,31E-01	0	0	0	0	0	0	0	0	0	0	1,40E-03	0
PENRE	MJ	2,43E+01	7,13E-01	2,07E+00	0	0	0	0	0	0	0	0	0	0	7,27E-02	0
PENRM	MJ.	1,23E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	3,66E+01	7,13E-01	2,07E+00	0	0	0	0	0	0	0	0	0	0	7,27E-02	0
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	9,81E-03	7,81E-05	1,44E-03	0	0	0	0	0	0	0	0	0	0	6,99E-05	0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

<sup>3</sup> The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.



## Waste production and output flows

### Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Non-hazardous waste disposed	kg	5,40E-02	2,98E-02	3,62E-01	0	0	0	0	0	0	0	0	0	0	2,68E-01	0
Hazardous waste disposed	kg	6,04E-06	1,79E-06	1,90E-05	0	0	0	0	0	0	0	0	0	0	1,04E-07	0
Radioactive waste disposed	kg	3,20E-05	4,51E-06	4,33E-06	0	0	0	0	0	0	0	0	0	0	4,02E-07	0

### Output flows

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material for recycling	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### Information on biogenic carbon content.

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in the product	kg C	0,00E+00
Biogenic carbon content in the packaging	kg C	6,67E-03

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>

## Group 4

These results are valid for the following product: Air-bur Sound 3 mm

## Potential environmental impact: mandatory indicators according to EN 15804

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceeding threshold values, safety margins, or risks.

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	8,72E-01	2,43E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	3,20E-02	0
GWP-biogenic	kg CO <sub>2</sub> eq.	1,86E-03	9,53E-06	2,41E-04	0	0	0	0	0	0	0	0	0	0	2,88E-06	0
GWP-luluc	kg CO <sub>2</sub> eq.	8,65E-04	1,11E-05	2,05E-04	0	0	0	0	0	0	0	0	0	0	3,27E-06	0
GWP-total	kg CO <sub>2</sub> eq.	8,74E-01	2,43E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	3,20E-02	0
ODP	kg CFC 11 eq.	4,10E-08	5,50E-09	8,54E-09	0	0	0	0	0	0	0	0	0	0	8,79E-10	0
AP	mol H <sup>+</sup> eq.	3,98E-03	9,71E-05	7,85E-04	0	0	0	0	0	0	0	0	0	0	2,62E-05	0
EP-fresh water	kg P eq.	2,04E-04	1,78E-06	4,26E-05	0	0	0	0	0	0	0	0	0	0	4,80E-07	0
EP-marine	kg N eq.	8,16E-04	2,84E-05	1,25E-04	0	0	0	0	0	0	0	0	0	0	5,83E-04	0
EP-terrestrial	mol N eq.	8,46E-03	3,11E-04	1,36E-03	0	0	0	0	0	0	0	0	0	0	9,47E-05	0
POCP	kg NMVOC eq.	3,01E-03	9,54E-05	4,36E-04	0	0	0	0	0	0	0	0	0	0	3,39E-05	0
ADP-minerals&metals*	kg Sb eq.	5,91E-06	1,06E-07	3,18E-06	0	0	0	0	0	0	0	0	0	0	1,02E-08	0
ADP-fossil*	MJ	2,29E+01	3,64E-01	1,89E+00	0	0	0	0	0	0	0	0	0	0	6,97E-02	0
WDP*	m <sup>3</sup>	6,60E-01	1,15E-03	5,34E-02	0	0	0	0	0	0	0	0	0	0	2,96E-03	0
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; 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; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Potential environmental impact: additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>4</sup>	kg CO <sub>2</sub> eq.	8,46E-01	2,41E-02	1,23E-01	0	0	0	0	0	0	0	0	0	0	2,77E-02	0

## Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	2,03E+00	5,97E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	1,43E-03	0
PERM	MJ	3,75E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	2,06E+00	5,97E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	1,43E-03	0
PENRE	MJ	2,45E+01	3,86E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	7,41E-02	0
PENRM	MJ.	1,06E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	3,52E+01	3,86E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	7,41E-02	0
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	1,63E-02	4,23E-05	1,40E-03	0	0	0	0	0	0	0	0	0	0	7,13E-05	0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

<sup>4</sup> The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

## Waste production and output flows

### Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Non-hazardous waste disposed	kg	7,99E-02	1,61E-02	8,18E-02	0	0	0	0	0	0	0	0	0	0	2,73E-01	0
Hazardous waste disposed	kg	6,85E-06	9,70E-07	1,89E-05	0	0	0	0	0	0	0	0	0	0	1,06E-07	0
Radioactive waste disposed	kg	2,33E-05	2,44E-06	4,06E-06	0	0	0	0	0	0	0	0	0	0	4,09E-07	0

### Output flows

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material for recycling	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### Information on biogenic carbon content.

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in the product	kg C	0,00E+00
Biogenic carbon content in the packaging	kg C	3,03E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>

## Group 5

These results are valid for the following product: Air-bur Sound 5 mm

### Potential environmental impact: mandatory indicators according to EN 15804

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceeding threshold values, safety margins, or risks.

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	1,37E+00	3,90E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	5,01E-02	0
GWP-biogenic	kg CO <sub>2</sub> eq.	2,92E-03	1,53E-05	2,41E-04	0	0	0	0	0	0	0	0	0	0	4,51E-06	0
GWP-luluc	kg CO <sub>2</sub> eq.	1,35E-03	1,78E-05	2,06E-04	0	0	0	0	0	0	0	0	0	0	5,14E-06	0
GWP-total	kg CO <sub>2</sub> eq.	1,37E+00	3,90E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	5,01E-02	0
ODP	kg CFC 11 eq.	6,47E-08	8,81E-09	8,63E-09	0	0	0	0	0	0	0	0	0	0	1,38E-09	0
AP	mol H <sup>+</sup> eq.	6,26E-03	1,56E-04	7,87E-04	0	0	0	0	0	0	0	0	0	0	4,11E-05	0
EP-fresh water	kg P eq.	3,21E-04	2,86E-06	4,26E-05	0	0	0	0	0	0	0	0	0	0	7,54E-07	0
EP-marine	kg N eq.	1,28E-03	4,56E-05	1,26E-04	0	0	0	0	0	0	0	0	0	0	9,15E-04	0
EP-terrestrial	mol N eq.	1,33E-02	4,98E-04	1,37E-03	0	0	0	0	0	0	0	0	0	0	1,49E-04	0
POCP	kg NMVOC eq.	4,74E-03	1,53E-04	4,38E-04	0	0	0	0	0	0	0	0	0	0	5,32E-05	0
ADP-minerals&metals*	kg Sb eq.	9,29E-06	1,70E-07	3,18E-06	0	0	0	0	0	0	0	0	0	0	1,59E-08	0
ADP-fossil*	MJ	3,59E+01	5,83E-01	1,90E+00	0	0	0	0	0	0	0	0	0	0	1,09E-01	0
WDP*	m <sup>3</sup>	1,04E+00	1,84E-03	5,37E-02	0	0	0	0	0	0	0	0	0	0	4,64E-03	0
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; 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; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Potential environmental impact: additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>5</sup>	kg CO <sub>2</sub> eq.	1,33E+00	3,86E-02	1,23E-01	0	0	0	0	0	0	0	0	0	0	4,35E-02	0

## Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	3,40E+00	9,56E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	2,24E-03	0
PERM	MJ	6,67E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	3,46E+00	9,56E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	2,24E-03	0
PENRE	MJ	3,85E+01	6,19E-01	2,03E+00	0	0	0	0	0	0	0	0	0	0	1,16E-01	0
PENRM	MJ.	1,67E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	5,52E+01	6,19E-01	2,03E+00	0	0	0	0	0	0	0	0	0	0	1,16E-01	0
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	2,56E-02	6,78E-05	1,40E-03	0	0	0	0	0	0	0	0	0	0	1,12E-04	0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

<sup>5</sup> The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

## Waste production and output flows

### Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Non-hazardous waste disposed	kg	1,25E-01	2,58E-02	1,23E-01	0	0	0	0	0	0	0	0	0	0	4,29E-01	0
Hazardous waste disposed	kg	1,08E-05	1,55E-06	1,89E-05	0	0	0	0	0	0	0	0	0	0	1,66E-07	0
Radioactive waste disposed	kg	3,64E-05	3,91E-06	4,10E-06	0	0	0	0	0	0	0	0	0	0	6,42E-07	0

### Output flows

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material for recycling	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### Information on biogenic carbon content.

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in the product	kg C	0,00E+00
Biogenic carbon content in the packaging	kg C	7,05E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>

## LCA interpretation

This section presents the interpretation of the results of potential environmental impact of groups 1 and 5, of least and greatest magnitude of impact. The graphs shown below indicate the impact contribution of each stage to the total impact by category.

### Group 1

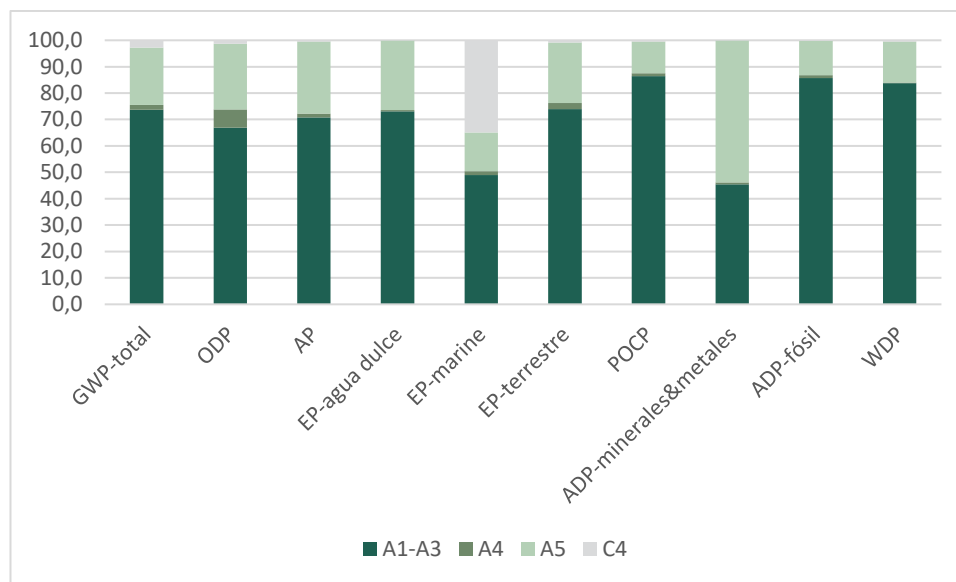


Figure 1. Environmental impact by life cycle stage of Air-bur Reticulado 5 mm

As Figure 1 indicates, in all categories, the product stage is the main responsible for environmental impacts, contributing between 45,4% (marine eutrophication) and 86,5% (tropospheric ozone formation). An exception is observed in the category of depletion of mineral and metal resources, where the stage with the greatest impact is A5-installation. The A5 also turns out to be the second most impactful in almost all impact categories.

As for the remaining stages, A4-distribution to the customer represents a maximum of 6,7% in impacts associated with the depletion of the stratospheric ozone layer, while C4-final disposal at the end of life presents its maximum in marine eutrophication (34,9%).



## Group 5

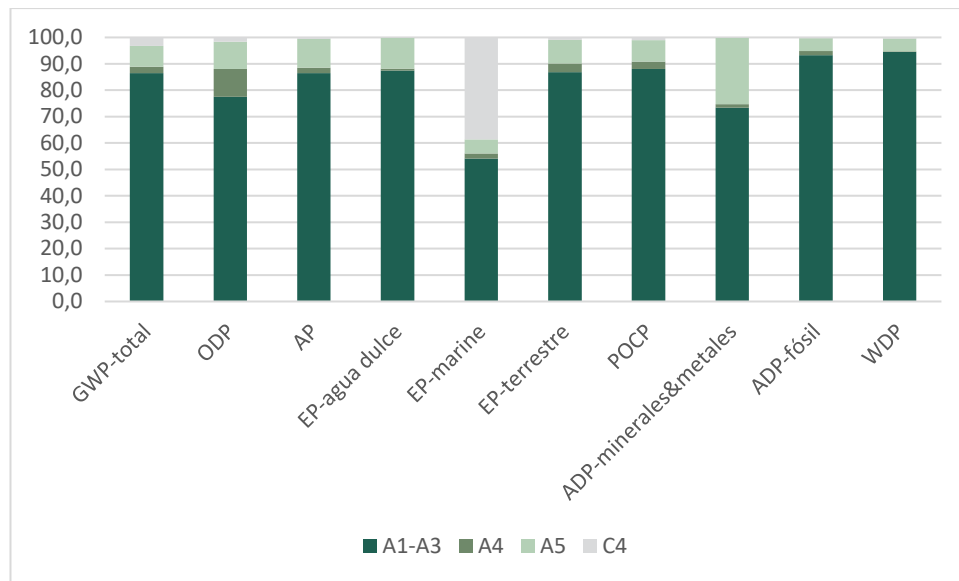


Figure 2. Environmental impact by life cycle stage of Air-bur Sound 5 mm

As can be seen in graph 2, the product stage (A1-A3) is the Life Cycle Stage that has the greatest impact for all the impact categories analyzed, representing between 73,4% (Depletion of fossil resources) and 94,5% (depletion of water resources) of the total impact of the life cycle of group 5.

A5-Installation is the stage with the second highest impact, contributing a maximum of 25,1% in the category of depletion of non-fossil abiotic elements. Closely, stage A4 also represents a 10,6% depletion of the ozone layer, although for the other indicators its contribution is not significant.

## Information related to Sector EPD

This EPD® is individual.

## Difference comparing to previous versions

First version of EPD®.

## References

- General Programme Instructions of the International EPD® System. Version 3.01.
- ISO 14020: 2000 Environmental labels and declarations — General principles
- ISO 14025: 2010 Environmental labels and declarations – Type III environmental declarations – Principles and procedures
- ISO 14040: 2006 Environmental management — Life cycle assessment — Principles and framework
- ISO 14044: 2006 Environmental management — Life cycle assessment — Requirements and guidelines
- UNE-EN 15804:2012 + A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- PCR 2019:14 Construction products (EN 15804+A2) version 1.11.
- PCR 2019:14-c-PCR-014 Acoustical ceiling and wall solutions (2022-01-28)
- EU Construction & Demolition Waste Management Protocol.
- European Commission (DG ENV) (2011). Report on the management of construction and demolition waste in the EU - SERVICE CONTRACT ON MANAGEMENT OF CONSTRUCTION AND DEMOLITION WASTE – SR1. Final Report Task 2. ENV.G.4/FRA/2008/0112. Paris.
- Marcel Gómez Consultoría Ambiental (2022). Análisis del Ciclo de Vida de los Sistemas de Aislantes Termoacústicos y Antiimpactos de BUR2000. Barcelona

## VERIFICATION STATEMENT CERTIFICATE CERTIFICADO DE DECLARACIÓN DE VERIFICACIÓN

*Certificate No. / Certificado nº: EPD07104*

TECNALIA R&I CERTIFICACION S.L., confirms that independent third-party verification has been conducted of the Environmental Product Declaration (EPD) on behalf of:

TECNALIA R&I CERTIFICACION S.L., confirma que se ha realizado verificación de tercera parte independiente de la Declaración Ambiental de Producto (DAP) en nombre de:

**BUR 2000, S.A.U.**  
**Camí Sagraments 34, Pol. Sant Ermengol**  
**08630 ABRERA (Barcelona) SPAIN**

for the following product(s):  
*para el siguiente(s) producto(s):*

**COMMERCIALISED ACOUSTIC ANTI-IMPACT INSULATORS AIR-BUR IMPACTO.**  
**AISLANTES ACÚSTICOS ANTI-IMPACTOS COMERCIALIZADOS AIR-BUR IMPACTO.**

with registration number **S-P-06259** in the International EPD® System ([www.environdec.com](http://www.environdec.com)).  
*con número de registro S-P-06259 en el Sistema Internacional EPD® ([www.environdec.com](http://www.environdec.com)).*

it's in conformity with:  
*es conforme con:*

- **ISO 14025:2010 Environmental labels and declarations. Type III environmental declarations.**
- **General Programme Instructions for the International EPD® System v.3.01.**
- **PCR 2019:14 Construction products (EN 15804:A2) v.1.11.**
- **PCR 2019:14-c-PCR-014 Acoustical ceiling and wall solutions (2022-01-28).**
- **UN CPC 369 Other plastics products.**

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Serial Nº / Nº Serie:	EPD0710400-E


Carlos Nazabal Alsua  
Manager



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