Environmental Product Declaration

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

REFLECTIVE THERMAL INSULATORS AIR-BUR TERMIC: LOW-THICKNESS AND XPS

by **BUR2000 S.A.U**

Programme:	The International EPD® System, www.environdec.com
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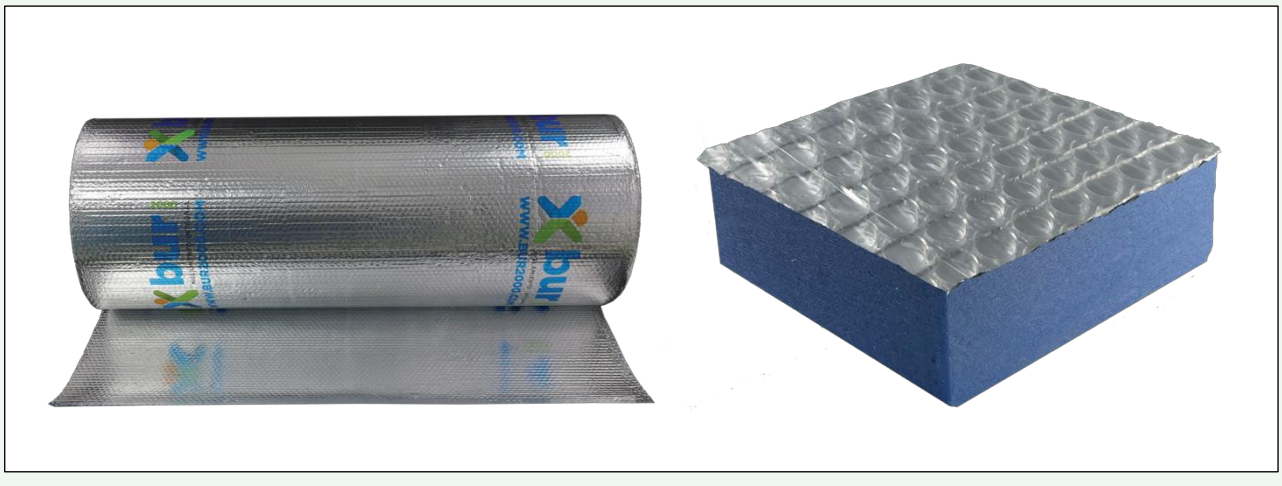
An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



General information

Programme information

Programme:	The International EPD® System
Address:	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): *PCR 2019:14 Construction Products (EN 15804+A2), version 1.11* *PCR 2019:14 c-PCR-005 Thermal Insulation products (EN 16783)*
PCR review was conducted by: *El Technical Committee of the International EPD® System* President: *Claudia A. Peña.* Contact via *info@environdec.com*
Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☐ EPD process certification ☒ EPD verification
Third party verifier: *TECNALIA R&I SL* Verifier: *Cristina Gazulla Santos* Accredited by: ENAC. Acreditation nº 125/C-PR283
Procedure for follow-up of data during EPD validity involves third party verifier: ☒Yes ☐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)
- VOC test (report 096667-1) issued by Tecnalia, in accordance with EN 16516:2017
- Radon gas test (report 21243) issued by LaRUC, Radioactivity Laboratory of the University of Cantabria, in accordance with ISO 11665-13.

In addition, BUR2000 products comply with the following standards:

- ASTM global standards
- EOTA technical assessment
- Technical Building Code CTE

Production site: Camí Sagraments 34, Pol. Sant Ermengol, 08630 Abrera, Barcelona, España.

Products information

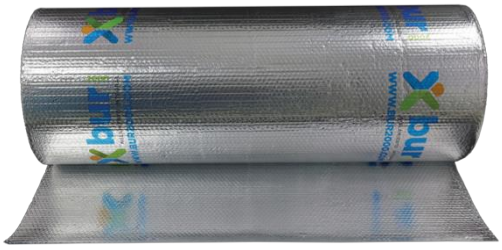
Products' names: **Air-bur Termic 10, Air-bur Termic S-YC, Air-bur Termic S-YC Adhesive, Air-bur Termic S-YC 13, Air-bur Termic S-YC HD, Air-bur Termic S, Air-bur Termic S Adhesive, Air-bur Termic PT, Air-bur CM XPS 20, Air-bur CM XPS 24, Air-bur CM XPS 30, Air-bur CM XPS 34, Air-bur CM XPS 40, Air-bur CM XPS 44, Air-bur CM XPS 50, Air-bur CM XPS 54, Air-bur CM XPS 60, Air-bur CM XPS 64, Air-bur CM XPS 80** and **Air-bur CM XPS 84**

Products' identification: This EPD represents both low-thickness reflective thermal insulations and reflective systems in a combination of materials for interior and exterior installation, plates and thermal bridges, with and without adhesive. This range of BUR2000 thermal insulation is intended to provide comprehensive thermal insulation solutions, in the different elements of interest in new and rehabilitation works, complying with the requirements demanded in the Technical Building Code.

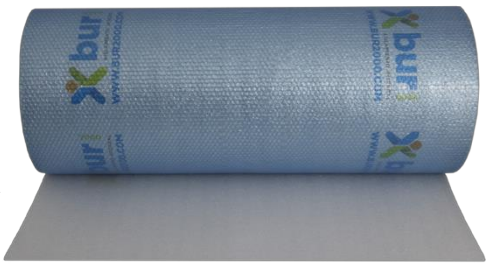
UN CPC Code: 369 Other plastic products.

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

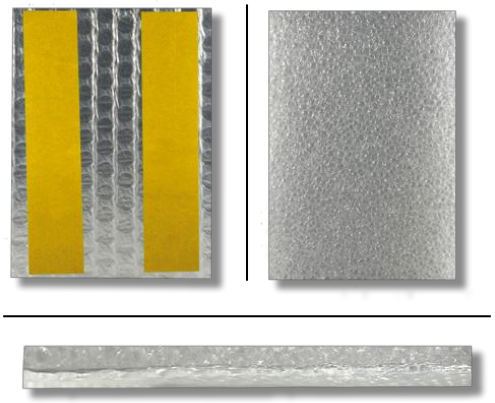
Air-bur Termic 10: Low-thickness reflective thermo-acoustic insulation system made up of two sheets of pure aluminum enclosing a sealed dry air bubble inside. The installation of Air-bur Termic 10 is carried out between 2 chambers. The air chambers can be replaced by traditional insulation (XPS, MW...), increasing the thermal equivalence.



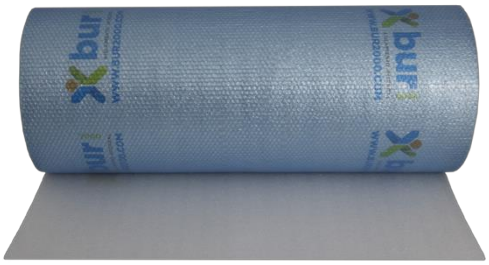
Air-bur Termic S-YC: Low-thickness reflective thermo-acoustic insulation system made up of a sheet of pure aluminum enclosed inside a bubble of airtight dry air and a polyethylene foam. Air-bur Termic S-YC installation does not require air chambers. In addition, it can be combined with a traditional insulation (XPS, MW,...) to increase the thermal equivalence.



Air-bur Termic S-YC Adhesive: Low-thickness reflective thermo-acoustic insulation system composed of a pure aluminum sheet enclosed inside a sealed dry air bubble, a polyethylene foam and an adhesive film for installation. Air-bur Termic S-YC Adhesive installation does not require air chambers. In addition, it can be combined with a traditional insulation (XPS, MW,...) to increase the thermal equivalence.



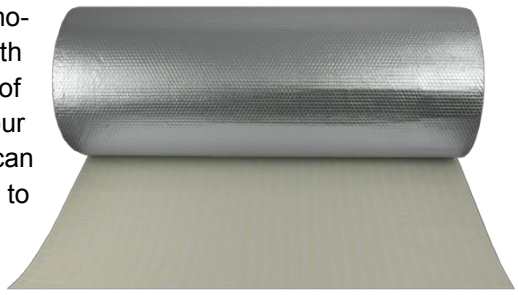
Air-bur Termic S-YC 13: Low-thickness reflective thermo-acoustic insulation system made up of a sheet of pure aluminum enclosed inside a bubble of airtight dry air and a polyethylene foam. Air-bur Termic S-YC 13mm installation does not require air chambers. In addition, it can be combined with a traditional insulation (XPS, MW,...) to increase the thermal equivalence.



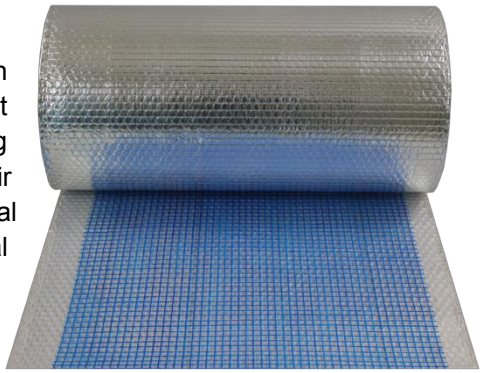
Air-bur Termic S-YC HD: High-performance, low-thickness reflective thermo-acoustic insulation system, made up of a pure aluminum sheet enclosed inside a sealed dry air bubble and a cross-linked polyethylene foam with greater acoustic performance and better compressive strength. Air-bur Termic S-YC installation does not require air chambers. In addition, it can be combined with a traditional insulation (XPS, MW,...) to increase the thermal equivalence.

Air-bur Termic S: Low-thickness reflective thermo-acoustic insulation system for plates and thermal bridges, made up of a pure aluminum sheet and a sealed dry air bubble. The Air-bur Termic S Installation requires air chambers. In addition, it can be combined with a traditional insulation (XPS, MW, ...) to increase the thermal equivalence.

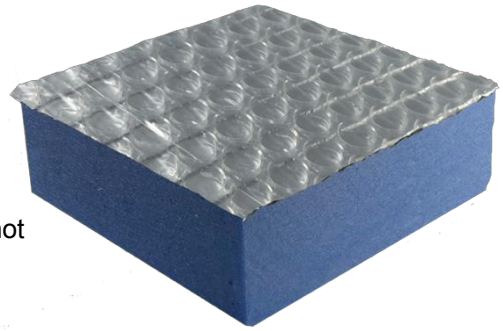
Air-bur Termic S Adhesive: Low-thickness reflective thermo-acoustic insulation system for plates and thermal bridges with adhesive, made up of a pure aluminum sheet and a bubble of airtight dry air and an adhesive film for installation. Air-bur Termic S Installation requires air chambers. In addition, it can be combined with a traditional insulation (XPS, MW, ...) to increase the thermal equivalence.



Air-bur Termic PT: Reflective thermo-acoustic insulation system for thermal bridges, made up of a pure aluminum sheet and a sealed dry air bubble with a fiberglass mesh for plastering mortar or plaster. Air-bur Termic PT installation requires air chambers. In addition, it can be combined with a traditional insulation (XPS, MW, ...) managing to increase the thermal equivalence.



AIR-BUR CM XPS 20, AIR-BUR CM XPS 30, AIR-BUR CM XPS 40, AIR-BUR CM XPS 50, AIR-BUR CM XPS 60 and **AIR-BUR CM XPS 80:** Reflective thermo-acoustic insulation system composed of an aluminium sheet enclosed by a layer of sealed dry air bubble and an Extruded Polystyrene (XPS) sheet. The system is supplied separately, for on-site installation. Does not require an air chamber.



AIR-BUR CM XPS 24, AIR-BUR CM XPS 34, AIR-BUR CM XPS 44, AIR-BUR CM XPS 54, AIR-BUR CM XPS 64 and **AIR-BUR CM XPS 84:** Ready-adhesive reflective thermo-acoustic insulation system, made up of an aluminium sheet enclosed by a layer of sealed dry air bubble and an Extruded Polystyrene (XPS) sheet. The system is supplied separately, for on-site installation. Does not require an air chamber.

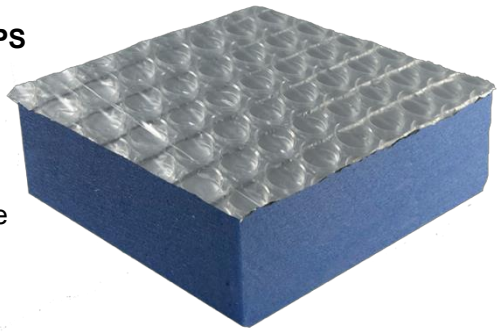


Table 1. Properties and technical characteristics of the low-thickness reflective thermal insulation systems of BUR2000

AIR-BUR TERMIC		Applied test standard	Air-bur Termic S-YC	Air-bur Termic S-YC Adhesive	Air-bur Termic S-YC 13	Air-bur Termic S-YC HD	Air-bur Termic 10	Air-bur Termic S	Air-bur Termic S Adhesive	Air-bur Termic PT
Physical properties (+/- 5%)	**Thickness (mm)**	EN 1602	350	350	517	350	230	230	260	230
	Weight (g/m2)	EN 823	8	8	13	10	4	4	4	4
Thermal properties	**Emissivity**	EN 16012	0,03				0,07			
	Reflectivity (%)	EN 16012	97,00				97,00			
	Thermal conductivity (λ) W/mK	EN ISO 16012:2012	0,025				0,025			
Thermal resistance (Rt)	**Vertical Facing (m2 K/W)**	EN ISO 16012:2012	1,35		1,51	1,45	1,46	0,98		0,16
	Horizontal Facing (m2 K/W)	EN ISO 16012:2012					2,40			
Thermal Equivalence of traditional insulation (mm) - from		Not Applicable	50,00		60,00			40,00		10,00
Acoustic properties	**Impact noise insulation Δ LW (dB)**	ISO 717-2	22,00			25,50	-	-	-	-
	Impact noise insulation LW "in situ" (dB (A))	UNE EN-ISO 140-8	69,00			-	-	-	-	-
	Airborne noise insulation R,w (C;Ctr) (dB)	UNE EN-ISO 717-1	53 (0; -3)	53 (0; -3)	-	-	51 (-1; -4)	51 (-1; -4)	-	-
Other properties	**Compressive strength (KPa)**	EN 826:1999	10,20			22,00	-	-	-	-
	Fire classification	EN 13501-1	NPD				B S1 d0 – M1	B S1 d0 – M1	NDP	B S1 d0
	Impermeability	EN ISO 12572	water and steam							
	Application temperature	Not Applicable	-20 °C + 80 °C							

	Anti-condensation	EN SISO 12572	Sí							
	Tensile Strength (N/5cm)	EN 11339	-	-	-	-	76,00			
	Resistance to elongation (%)	EN ISO 12310-1	-	-	-	-	3,50			
	Tear Strength (N)	EN ISO 12310-1	-	-	-	-	28,00			
	Hazardous substances	Not Applicable	Do not contain			-	Do not contain			
	Radon Gas Diffusion Coefficient	ISO 11665-13	< 10^{-13} m2/s comply with DB HE6							
Recommended uses	**Vertical facing**	Not Applicable	Interior wall, exterior wall, slab edges, party walls	Pillars, slab edges	-	-	Interior wall, party walls	Pillars*, interior wall, slab edges*, ventilated façade	Pillars, interior wall, slab edges, ventilated façade	Pillars, thermal bridges, slab edges
	Horizontal facing	Not Applicable	Under roof, pitched roof, floors, deck	-	Under roof, pitched roof, roof, first perimeter meter, floors and floors, under floor, radon gas barrier	Under roof, roof, pitched roof, under floor, floors and floors, first perimeter meter, radon gas barrier	Under roof, pitched roof, raised floors, radon gas barrier	Under roof, pitched roof combined with xps, radon gas barrier*	Under roof, pitched roof combined with xps, radon gas barrier*	Thermal bridges, radon gas barrier

* For this certified use, an Air Chamber is not required. For the installation recommendation consult https://www.bur2000.com/

Table 2. Properties and technical characteristics of BUR2000 reflective XPS thermal insulation

AIR-BUR TERMIC		Applied test standard	Air-bur CM XPS 20	Air-bur CM XPS 24	Air-bur CM XPS 30	Air-bur CM XPS 34	Air-bur CM XPS 40	Air-bur CM XPS 44	Air-bur CM XPS 50	Air-bur CM XPS 54	Air-bur CM XPS 60	Air-bur CM XPS 64	Air-bur CM XPS 80	Air-bur CM XPS 84
Physical properties	**Thickness (mm)**	EN 823	20		30		40		50		60		80	
Thermal properties	**Emissivity**	EN 16012	0,12											
	Reflectivity (%)	EN 16012	88,00											
Thermal resistance (Rt)	**Horizontal Facing (m2 K/W)**	EN ISO 16012:2012	1,83		2,14		2,45		2,76		3,08		3,40	
Acoustic properties	**Impact noise insulation Δ LW (dB)**	ISO 717-2	23,00											
Other properties	**Density (kg/m3)**	Not applicable	30,00											
	Water absorption	EN ISO 12572	< 0,7											
	Compressive strength (KPa)	EN 826:1999	300											
	Fire classification	EN 13501-1	F											
	Application temperature	Not applicable	-20 °C + 80 °C											
Recommended uses	**Horizontal facing**	Not applicable	Under roof, pitched roof, ground cover											

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 m2) of AIR-BUR TERMIC manufactured products with the main function as an in-situ thermal insulation system in buildings has been chosen as the functional unit, for a useful life of 20 years. The values of R, thickness and weight of each product reference corresponding to this unit are collected in the following two tables:

Table 3. Thermal resistance values, thickness, weight and applications corresponding to one square meter of Air-bur Termic (1)

CONCEPT	Properties	Norma de ensayo aplicada	Air-bur Termic S-YC	Air-bur Termic S-YC Adhesive	Air-bur Termic S-YC 13	Air-bur Termic S-YC HD	Air-bur Termic 10	Air-bur Termic S	Air-bur Termic S Adhesive	Air-bur Termic PT
Physical properties	**Thickness (mm)**	EN 1602	350	350	517	350	230	230	260	230
	Weight (g/m2)	EN 823	8	8	13	10	4	4	4	4
Thermal resistance (Rt)	**Vertical Facing (m2 K/W)**	EN ISO 16012:2012	1,35		1,51	1,45	1,46	0,98		0,16
	Horizontal Facing (m2 K/W)	EN ISO 16012:2012					2,40			
Application area: in buildings		UNE-EN 16783	Ceiling, roof, floor, wall	Wall	Ceiling, roof, floor		Ceiling, roof, floor, wall			

Table 4. Thermal resistance values, thickness, weight and applications corresponding to one square meter of Air-bur Termic (2)

CONCEPT	Properties	Norma de ensayo aplicada	Air-bur CM XPS 20	Air-bur CM XPS 24	Air-bur CM XPS 30	Air-bur CM XPS 34	Air-bur CM XPS 40	Air-bur CM XPS 44	Air-bur CM XPS 50	Air-bur CM XPS 54	Air-bur CM XPS 60	Air-bur CM XPS 64	Air-bur CM XPS 80	Air-bur CM XPS 84
Physical properties	**Thickness (mm)**	EN 823	20		30		40		50		60		80	
Thermal resistance (Rt)	**Horizontal Facing (m2 K/W)**	EN ISO 16012:2012	1,83		2,14		2,45		2,76		3,08		3,40	
Application area: in buildings		UNE-EN 16783	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: The primary data used has been obtained from BUR2000 production centre, for the year 2021, being representative of the products and the production process. Manufacturing takes place in said centre in Abrera, Barcelona.

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. The generation of the energy consumed in module A3 during the manufacture of the product is also assigned to this module.

A2- Transportation of raw materials

This module includes the transport of the different materials from the supplier to the factory where the final products are elaborated (Abrera, Barcelona). The distance and type of truck and specific ship for each material have been introduced.

A3- Manufacturing

This module includes the consumption of energy and packaging materials used during the manufacturing process of BUR2000 thermal 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 free of CO2 emissions, according to the supplier's information. The electrical consumption of each product reference is the sum of, first, the specific consumption of the machine(s) involved, and second, the general electrical consumption of the factory (lighting, air conditioning, etc.). To know the first, the power and performance by product reference, per machine, have been taken into account. To calculate the second, 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 m2), both manufactured and stored in the plant. In this way, the general electrical consumption is the same for all the references studied.

The products studied in this EPD are manufactured using three main machines. The production process that involves these machines is summarized below:

Machine 1
Machine 1 is called "Thermosealant 1", where the family of Air-bur TERMIC products is manufactured, in its different presentations (Termic 10, Termic S-YC, Termic S).

This machine 1 " Thermosealant 1" has several mobile axis rollers where the coils that make up the different layers are installed according to the material; it also has a roller where the cardboard tube is inserted where the product is rewound. This generates the rolling of the raw material jumbo coils, the rolling of the bubble die cutter, heat sealing of the layers, rewinding of elements, among others.

Machine 2
Machine 2 is called " Thermosealant 2", where the family of Air-bur TERMIC products is manufactured, its different presentations (Termic 10, Termic S-YC, Termic S).

At a structural and functional level, machine 2 “Thermosealant 2” is similar to “Thermosealant 1” and performs a slightly different process (with the option of punching, as applicable).

Machine 3
Machine 3 is called the “Gluer”, where the family of Air-bur CM XPS products is manufactured, in their different thicknesses.

It has at one end a tread where the jumbo coil of the partial element made up of Bubble and Aluminium is installed. It also has a platform where the Extruded Polystyrene Sheets (XPS) are located. Finally, it has an oven where the glue tablets are introduced, to liquidize the glue for its application through the blowers. This generates the rolling of the coils to be glued, the oven of the glue tablets for their liquefaction and the automatic cutting blade.

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
Fuel's type and consumption, type of vehicles used for transportation. For example: long-distance truck, ship, etc.	• Transport van 3,5 – 7 tn EURO5. Diesel consumption: 0,109 kg/tkm • Small truck 7,5-16 tn EURO5. Diesel consumption: 0,047 kg/tkm • Medium truck 16-32 tn EURO5. Diesel consumption: 0,037 kg/tkm • Big truck > 32 tn EURO5. Diesel consumption: 0,019 kg/tkm
Distance	• Van: 75 km • Small truck: 493 km • Medium truck: 560 km • Big truck: 641 km
Capacity utilization (including empty return trip)	% assumption from Ecoinvent
Apparent density of transported product	Varying between 22,20 and 72,00 kg/m3
Useful Capacity Factor	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)	0,128 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	0,128 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 thermal 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:

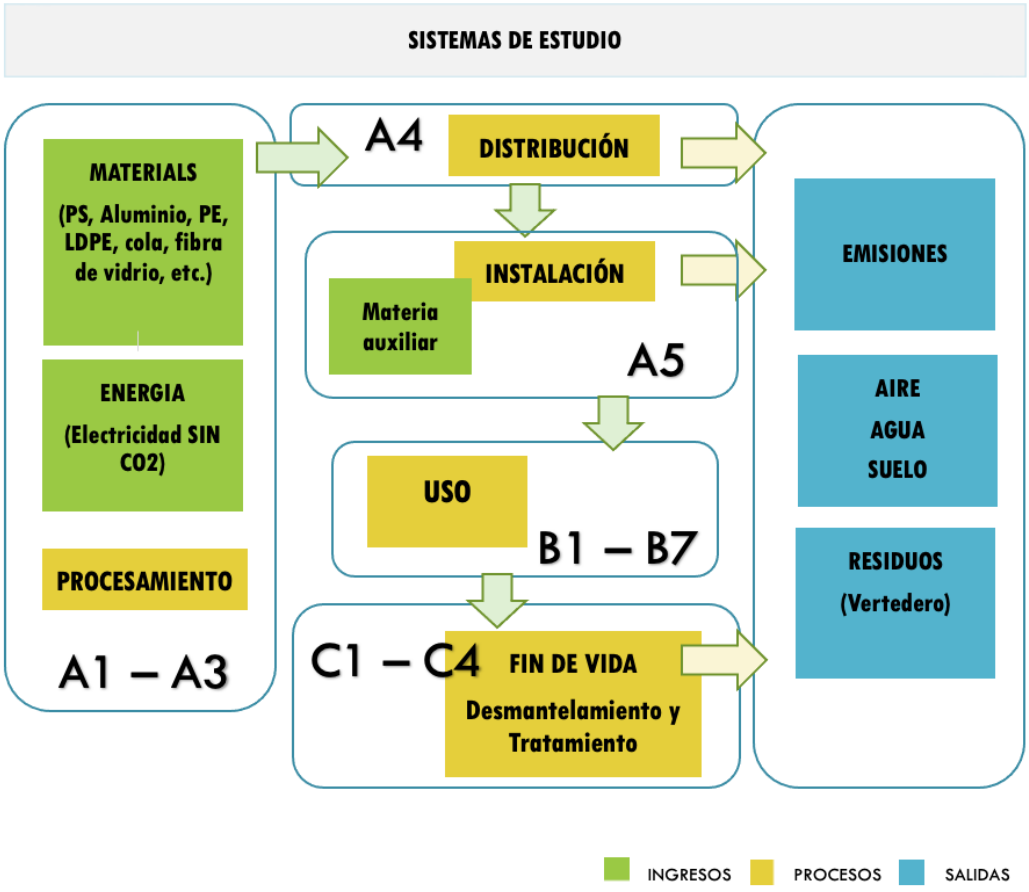
Module	Parameter	Unit (expressed per functional unit)	Average value
C1 Dismantling	Process of collection s pecified by type	Kg collected manually and separately	0
		Kg collected mixed with construction waste	0,98 kg
C2 Transportation	Fuel type and consumption, type of v ehicles used for the tra nsport	Truck 16 t EURO5	Diesel consumption: 0,0165 kg/tkm
	Distance	km	100
	Capacity use	% assumption by Ecoinvent	100% volume outbound trip

	Useful capacity factor		1
C3 Waste treatment	System recovery specified by type	Kg for reuse	0
		Kg for recycle	0
		Kg for energy recovery	0
C4 Final disposal	Disposal specified by type	Kg for elimination	Total 0,98 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/

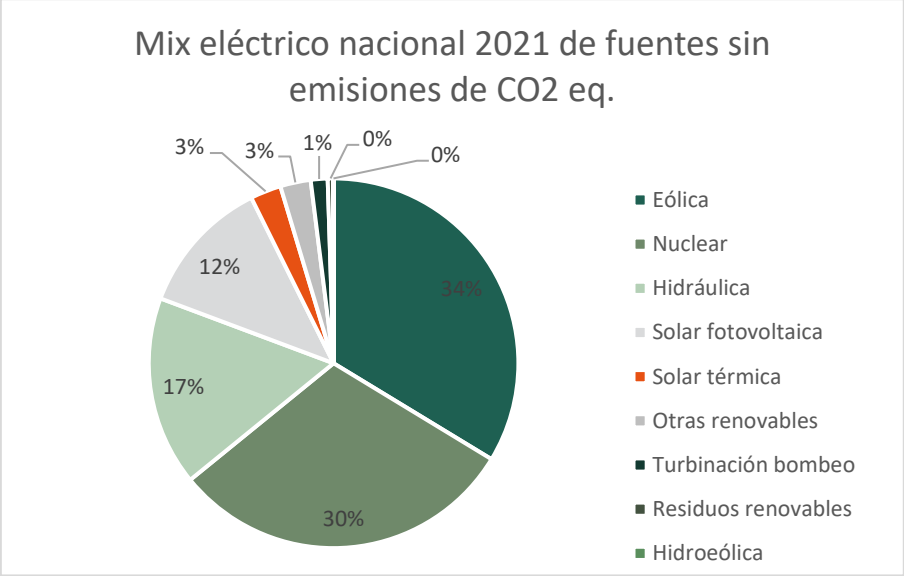
Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

	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	ES	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.
- The mix of electricity used in the manufacturing plant is an adaptation of the 2021 national mix of sources WITHOUT CO2 eq emissions, according to the supplier's information. The energy sources in this mix are the following: Wind 33,7%, Nuclear 30,4%, Hydro 16,6%, Solar photovoltaic 12%, Solar thermal 2,7%, Other renewables 2,7%, Pumped turbine 1,5%, Renewable waste 0,5% and Hydro-wind 0,01%[1]



- 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.

[1] STRUCTURE OF THE GENERATION WITH/WITHOUT EMISSIONS CO2 EQ. (%) | ELECTRICAL SYSTEM: National. Source: Red Eléctrica España – Consulted for the period January-December 2021

Content information

The presented BUR2000 thermal 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-%
Extruded polystyrene	0-90%	0	0
Laminated aluminium	2-59%	0	0
LDPE	7-75%	0	0
Polyester foam	0-46%	0	0
Glue	0-28%	0	0
Glass fibre	0-40%	0	0
TOTAL	0,17-1,88 kg		
Packaging Materials**	**Weight, kg**	**Weight-% (versus product)**	**Post-consumer material, weight-%**
Polyethylene film, bag and label	0-0,006	0-1,7%	0
Cardboard tube	0-0,012	0-3,6%	0
Galvanized steel strap	0-4,17E-05	0-0,01%	0
Wooden pallet	0-0,55	0-29,6%	0
TOTAL	0-0,086	0-27,4%	

** Several of the products studied are sent to the customer without any type of packaging

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.

Below are the results of the potential environmental impact of the products studied, grouped into groups with a variation of less than 10%, of ascending magnitude. These displayed values are the arithmetic mean per group.

Group 1

These results are valid for the following product: Air-bur Termic S

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_2 eq.	1,33E+00	1,66E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	2,00E-02	0
GWP-biogenic	kg CO_2 eq.	2,85E-03	6,62E-06	2,41E-04	0	0	0	0	0	0	0	0	0	0	1,80E-06	0
GWP-luluc	kg CO_2 eq.	2,89E-03	7,77E-06	2,05E-04	0	0	0	0	0	0	0	0	0	0	2,05E-06	0
GWP-total	kg CO_2 eq.	1,33E+00	1,66E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	2,00E-02	0
ODP	kg CFC 11 eq.	4,34E-08	3,75E-09	8,52E-09	0	0	0	0	0	0	0	0	0	0	5,50E-10	0
AP	mol H^+ eq.	7,32E-03	6,63E-05	7,84E-04	0	0	0	0	0	0	0	0	0	0	1,64E-05	0
EP-fresh water	kg P eq	4,06E-04	1,24E-06	4,26E-05	0	0	0	0	0	0	0	0	0	0	3,01E-07	0
EP-marine	kg N eq.	1,31E-03	1,93E-05	1,25E-04	0	0	0	0	0	0	0	0	0	0	3,65E-04	0
EP-terrestrial	mol N eq.	1,33E-02	2,11E-04	1,36E-03	0	0	0	0	0	0	0	0	0	0	5,93E-05	0
POCP	kg NMVOC eq.	4,83E-03	6,50E-05	4,35E-04	0	0	0	0	0	0	0	0	0	0	2,12E-05	0
ADP-minerals&metals*	kg Sb eq.	6,96E-06	7,47E-08	3,18E-06	0	0	0	0	0	0	0	0	0	0	6,36E-09	0
ADP-fossil*	MJ	2,51E+01	2,49E-01	1,89E+00	0	0	0	0	0	0	0	0	0	0	4,36E-02	0
WDP*	m^3	6,25E-01	7,96E-04	5,34E-02	0	0	0	0	0	0	0	0	0	0	1,85E-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[2]	kg CO_2 eq.	1,29E+00	1,65E-02	1,23E-01	0	0	0	0	0	0	0	0	0	0	1,74E-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	2,06E+00	4,16E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	8,95E-04	0
PERM	MJ	1,11E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	1,08E+01	4,16E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	8,95E-04	0
PENRE	MJ	2,68E+01	2,64E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	4,64E-02	0
PENRM	MJ.	8,76E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	3,55E+01	2,64E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	4,64E-02	0
SM	kg	1,38E-01	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^3	1,57E-02	2,94E-05	1,40E-03	0	0	0	0	0	0	0	0	0	0	4,46E-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															

[2] 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	1,88E-01	1,09E-02	7,28E-02	0	0	0	0	0	0	0	0	0	0	1,71E-01	0
Hazardous waste disposed	kg	2,84E-04	6,65E-07	1,89E-05	0	0	0	0	0	0	0	0	0	0	6,61E-08	0
Radioactive waste disposed	kg	3,66E-05	1,67E-06	4,05E-06	0	0	0	0	0	0	0	0	0	0	2,56E-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	4,11E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

Group 2

These results are valid for the following products: Air-bur Termic S Adhesive and Air-bur Termic PT

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_2 eq.	1,55E+00	2,39E-02	6,29E-02	0	0	0	0	0	0	0	0	0	0	3,18E-02	0
GWP-biogenic	kg CO_2 eq.	3,30E-03	9,51E-06	1,21E-04	0	0	0	0	0	0	0	0	0	0	2,86E-06	0
GWP-luluc	kg CO_2 eq.	3,07E-03	1,12E-05	1,03E-04	0	0	0	0	0	0	0	0	0	0	3,25E-06	0
GWP-total	kg CO_2 eq.	1,55E+00	2,39E-02	6,31E-02	0	0	0	0	0	0	0	0	0	0	3,18E-02	0
ODP	kg CFC 11 eq.	5,92E-08	5,39E-09	4,31E-09	0	0	0	0	0	0	0	0	0	0	8,74E-10	0
AP	mol H^+ eq.	8,67E-03	9,52E-05	3,93E-04	0	0	0	0	0	0	0	0	0	0	2,60E-05	0
EP-fresh water	kg P eq	4,70E-04	1,78E-06	2,13E-05	0	0	0	0	0	0	0	0	0	0	4,78E-07	0
EP-marine	kg N eq.	1,58E-03	2,78E-05	6,28E-05	0	0	0	0	0	0	0	0	0	0	5,80E-04	0
EP-terrestrial	mol N eq.	1,62E-02	3,03E-04	6,83E-04	0	0	0	0	0	0	0	0	0	0	9,41E-05	0
POCP	kg NMVOC eq.	5,73E-03	9,33E-05	2,19E-04	0	0	0	0	0	0	0	0	0	0	3,37E-05	0
ADP-minerals&metals*	kg Sb eq.	9,87E-06	1,07E-07	1,59E-06	0	0	0	0	0	0	0	0	0	0	1,01E-08	0
ADP-fossil*	MJ	3,00E+01	3,58E-01	9,48E-01	0	0	0	0	0	0	0	0	0	0	6,93E-02	0
WDP*	m^3	7,18E-01	1,14E-03	2,69E-02	0	0	0	0	0	0	0	0	0	0	2,94E-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[3]	kg CO_2 eq.	1,50E+00	2,37E-02	6,14E-02	0	0	0	0	0	0	0	0	0	0	2,76E-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	2,64E+00	5,98E-03	6,54E-02	0	0	0	0	0	0	0	0	0	0	1,42E-03	0
PERM	MJ	1,11E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	1,55E+00	5,98E-03	6,54E-02	0	0	0	0	0	0	0	0	0	0	1,42E-03	0
PENRE	MJ	3,20E+01	3,80E-01	1,01E+00	0	0	0	0	0	0	0	0	0	0	7,37E-02	0
PENRM	MJ.	8,76E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	4,08E+01	3,80E-01	1,01E+00	0	0	0	0	0	0	0	0	0	0	7,37E-02	0
SM	kg	1,38E-01	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^3	1,85E-02	4,23E-05	7,02E-04	0	0	0	0	0	0	0	0	0	0	7,08E-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															

[3] 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	2,13E-01	1,56E-02	6,23E-02	0	0	0	0	0	0	0	0	0	0	2,72E-01	0
Hazardous waste disposed	kg	2,86E-04	9,55E-07	9,47E-06	0	0	0	0	0	0	0	0	0	0	1,05E-07	0
Radioactive waste disposed	kg	4,59E-05	2,40E-06	2,05E-06	0	0	0	0	0	0	0	0	0	0	4,07E-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	4,11E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

Group 3

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

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_2 eq.	2,49E+00	1,56E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	1,98E-02	0
GWP-biogenic	kg CO_2 eq.	5,07E-03	6,21E-06	2,41E-04	0	0	0	0	0	0	0	0	0	0	1,78E-06	0
GWP-luluc	kg CO_2 eq.	5,79E-03	7,29E-06	2,05E-04	0	0	0	0	0	0	0	0	0	0	2,03E-06	0
GWP-total	kg CO_2 eq.	2,50E+00	1,56E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	1,98E-02	0
ODP	kg CFC 11 eq.	8,28E-08	3,52E-09	8,52E-09	0	0	0	0	0	0	0	0	0	0	5,45E-10	0
AP	mol H^+ eq.	1,43E-02	6,22E-05	7,84E-04	0	0	0	0	0	0	0	0	0	0	1,63E-05	0
EP-fresh water	kg P eq	7,74E-04	1,17E-06	4,26E-05	0	0	0	0	0	0	0	0	0	0	2,98E-07	0
EP-marine	kg N eq.	2,48E-03	1,81E-05	1,25E-04	0	0	0	0	0	0	0	0	0	0	3,62E-04	0
EP-terrestrial	mol N eq.	2,55E-02	1,98E-04	1,36E-03	0	0	0	0	0	0	0	0	0	0	5,88E-05	0
POCP	kg NMVOC eq.	8,91E-03	6,10E-05	4,35E-04	0	0	0	0	0	0	0	0	0	0	2,10E-05	0
ADP-minerals&metals*	kg Sb eq.	1,30E-05	7,01E-08	3,18E-06	0	0	0	0	0	0	0	0	0	0	6,30E-09	0
ADP-fossil*	MJ	4,29E+01	2,34E-01	1,89E+00	0	0	0	0	0	0	0	0	0	0	4,33E-02	0
WDP*	m^3	1,03E+00	7,47E-04	5,34E-02	0	0	0	0	0	0	0	0	0	0	1,84E-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[4]	kg CO_2 eq.	2,42E+00	1,55E-02	1,23E-01	0	0	0	0	0	0	0	0	0	0	1,72E-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	3,86E+00	3,91E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	8,87E-04	0
PERM	MJ	1,11E-01	0	0	0	0	0	0	0	0	0	0	0	0		0
PERT	MJ	1,73E+01	3,91E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	8,87E-04	0
PENRE	MJ	4,58E+01	2,48E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	4,60E-02	0
PENRM	MJ.	1,34E+01	0	0	0	0	0	0	0	0	0	0	0	0		0
PENRT	MJ	5,92E+01	2,48E-01	2,02E+00	0	0	0	0	0	0	0	0	0	0	4,60E-02	0
SM	kg	6,90E-02	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^3	2,49E-02	4,63E-07	1,25E-03	0	0	0	0	0	0	0	0	0	0	4,42E-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															

[4] 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	3,70E-01	1,02E-02	7,28E-02	0	0	0	0	0	0	0	0	0	0	1,70E-01	0
Hazardous waste disposed	kg	6,28E-04	6,24E-07	1,89E-05	0	0	0	0	0	0	0	0	0	0	6,55E-08	0
Radioactive waste disposed	kg	6,49E-05	1,57E-06	4,05E-06	0	0	0	0	0	0	0	0	0	0	2,54E-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	4,11E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

Group 4

These results are valid for the following products: Air-bur Termic S-YC HD and Air-bur Termic S-YC 13

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_2 eq.	2,96E+00	3,39E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	4,00E-02	0
GWP-biogenic	kg CO_2 eq.	6,30E-03	1,35E-05	2,41E-04	0	0	0	0	0	0	0	0	0	0	3,60E-06	0
GWP-luluc	kg CO_2 eq.	5,90E-03	1,58E-05	2,06E-04	0	0	0	0	0	0	0	0	0	0	4,10E-06	0
GWP-total	kg CO_2 eq.	2,97E+00	3,39E-02	1,26E-01	0	0	0	0	0	0	0	0	0	0	4,00E-02	0
ODP	kg CFC 11 eq.	9,66E-08	7,65E-09	8,65E-09	0	0	0	0	0	0	0	0	0	0	1,10E-09	0
AP	mol H^+ eq.	1,60E-02	1,35E-04	7,87E-04	0	0	0	0	0	0	0	0	0	0	3,28E-05	0
EP-fresh water	kg P eq	8,92E-04	2,53E-06	4,26E-05	0	0	0	0	0	0	0	0	0	0	6,01E-07	0
EP-marine	kg N eq.	2,84E-03	3,94E-05	1,26E-04	0	0	0	0	0	0	0	0	0	0	7,30E-04	0
EP-terrestrial	mol N eq.	2,90E-02	4,30E-04	1,37E-03	0	0	0	0	0	0	0	0	0	0	1,19E-04	0
POCP	kg NMVOC eq.	1,23E-02	1,32E-04	4,39E-04	0	0	0	0	0	0	0	0	0	0	4,24E-05	0
ADP-minerals&metals*	kg Sb eq.	1,57E-05	1,52E-07	3,18E-06	0	0	0	0	0	0	0	0	0	0	1,27E-08	0
ADP-fossil*	MJ	6,00E+01	5,07E-01	1,90E+00	0	0	0	0	0	0	0	0	0	0	8,72E-02	0
WDP*	m^3	1,44E+00	1,62E-03	5,38E-02	0	0	0	0	0	0	0	0	0	0	3,70E-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[5]	kg CO_2 eq.	2,88E+00	3,36E-02	1,23E-01	0	0	0	0	0	0	0	0	0	0	3,47E-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	5,48E+00	8,49E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	1,79E-03	0
PERM	MJ	2,34E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	5,72E+00	8,49E-03	1,31E-01	0	0	0	0	0	0	0	0	0	0	1,79E-03	0
PENRE	MJ	6,41E+01	5,39E-01	2,03E+00	0	0	0	0	0	0	0	0	0	0	9,27E-02	0
PENRM	MJ.	1,99E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	8,40E+01	5,39E-01	2,03E+00	0	0	0	0	0	0	0	0	0	0	9,27E-02	0
SM	kg	1,01E-01	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^3	3,46E-02	6,00E-05	1,41E-03	0	0	0	0	0	0	0	0	0	0	8,92E-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															

[5] 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	3,84E-01	2,21E-02	1,33E-01	0	0	0	0	0	0	0	0	0	0	3,42E-01	0
Hazardous waste disposed	kg	5,69E-04	1,36E-06	1,89E-05	0	0	0	0	0	0	0	0	0	0	1,32E-07	0
Radioactive waste disposed	kg	8,35E-05	3,40E-06	4,11E-06	0	0	0	0	0	0	0	0	0	0	5,12E-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	9,95E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

Group 5

These results are valid for the following products: Air-bur CM XPS 20 and Air-bur CM XPS 24

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_2 eq.	4,06E+00	6,36E-02	6,31E-02	0	0	0	0	0	0	0	0	0	0	9,27E-02	0
GWP-biogenic	kg CO_2 eq.	1,89E-02	2,53E-05	1,21E-04	0	0	0	0	0	0	0	0	0	0	8,34E-06	0
GWP-luluc	kg CO_2 eq.	3,42E-03	2,97E-05	1,03E-04	0	0	0	0	0	0	0	0	0	0	9,50E-06	0
GWP-total	kg CO_2 eq.	4,08E+00	6,36E-02	6,33E-02	0	0	0	0	0	0	0	0	0	0	9,27E-02	0
ODP	kg CFC 11 eq.	1,10E-07	1,43E-08	4,38E-09	0	0	0	0	0	0	0	0	0	0	2,55E-09	0
AP	mol H^+ eq.	1,78E-02	2,53E-04	3,95E-04	0	0	0	0	0	0	0	0	0	0	7,60E-05	0
EP-fresh water	kg P eq	6,97E-04	4,75E-06	2,13E-05	0	0	0	0	0	0	0	0	0	0	1,39E-06	0
EP-marine	kg N eq.	3,01E-03	7,39E-05	6,34E-05	0	0	0	0	0	0	0	0	0	0	1,69E-03	0
EP-terrestrial	mol N eq.	3,13E-02	8,07E-04	6,89E-04	0	0	0	0	0	0	0	0	0	0	2,75E-04	0
POCP	kg NMVOC eq.	1,93E-02	2,48E-04	2,21E-04	0	0	0	0	0	0	0	0	0	0	9,83E-05	0
ADP-minerals&metals*	kg Sb eq.	8,01E-06	2,86E-07	1,59E-06	0	0	0	0	0	0	0	0	0	0	2,95E-08	0
ADP-fossil*	MJ	8,34E+01	9,52E-01	9,53E-01	0	0	0	0	0	0	0	0	0	0	2,02E-01	0
WDP*	m^3	2,41E+00	3,04E-03	2,71E-02	0	0	0	0	0	0	0	0	0	0	8,58E-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[6]	kg CO_2 eq.	3,90E+00	6,31E-02	6,16E-02	0	0	0	0	0	0	0	0	0	0	8,05E-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	4,33E+00	1,59E-02	6,54E-02	0	0	0	0	0	0	0	0	0	0	4,15E-03	0
PERM	MJ	5,45E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	4,38E+00	1,59E-02	6,54E-02	0	0	0	0	0	0	0	0	0	0	4,15E-03	0
PENRE	MJ	8,94E+01	1,01E+00	1,02E+00	0	0	0	0	0	0	0	0	0	0	2,15E-01	0
PENRM	MJ.	3,32E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	1,23E+02	1,01E+00	1,02E+00	0	0	0	0	0	0	0	0	0	0	2,15E-01	0
SM	kg	1,38E-01	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^3	6,03E-02	1,12E-04	7,07E-04	0	0	0	0	0	0	0	0	0	0	2,07E-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															

[6] 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	1,62E-01	3,03E-05	8,44E-02	0	0	0	0	0	0	0	0	0	0	7,91E-01	0
Hazardous waste disposed	kg	2,78E-04	1,93E-06	8,92E-06	0	0	0	0	0	0	0	0	0	0	1,21E-07	0
Radioactive waste disposed	kg	7,18E-05	5,25E-06	1,71E-06	0	0	0	0	0	0	0	0	0	0	3,67E-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	7,58E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

Group 6

These results are valid for the following products: Air-bur Termic S-YC and Air-bur Termic S-YC Adhesive

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_2 eq.	5,48E+00	3,44E-02	6,67E-03	0	0	0	0	0	0	0	0	0	0	3,56E-02	0
GWP-biogenic	kg CO_2 eq.	1,15E-02	1,37E-05	1,23E-05	0	0	0	0	0	0	0	0	0	0	3,21E-06	0
GWP-luluc	kg CO_2 eq.	1,03E-02	1,61E-05	1,06E-05	0	0	0	0	0	0	0	0	0	0	3,65E-06	0
GWP-total	kg CO_2 eq.	5,50E+00	3,44E-02	6,69E-03	0	0	0	0	0	0	0	0	0	0	3,56E-02	0
ODP	kg CFC 11 eq.	1,74E-07	7,77E-09	5,84E-10	0	0	0	0	0	0	0	0	0	0	9,80E-10	0
AP	mol H^+ eq.	2,92E-02	1,37E-04	4,29E-05	0	0	0	0	0	0	0	0	0	0	2,92E-05	0
EP-fresh water	kg P eq	1,64E-03	2,57E-06	2,16E-06	0	0	0	0	0	0	0	0	0	0	5,36E-07	0
EP-marine	kg N eq.	5,20E-03	4,00E-05	7,52E-06	0	0	0	0	0	0	0	0	0	0	6,50E-04	0
EP-terrestrial	mol N eq.	5,33E-02	4,37E-04	8,19E-05	0	0	0	0	0	0	0	0	0	0	1,06E-04	0
POCP	kg NMVOC eq.	2,09E-02	1,34E-04	2,59E-05	0	0	0	0	0	0	0	0	0	0	3,78E-05	0
ADP-minerals&metals*	kg Sb eq.	2,91E-05	1,55E-07	1,60E-07	0	0	0	0	0	0	0	0	0	0	1,13E-08	0
ADP-fossil*	MJ	1,12E+02	5,15E-01	1,05E-01	0	0	0	0	0	0	0	0	0	0	7,77E-02	0
WDP*	m^3	2,77E+00	1,65E-03	3,16E-03	0	0	0	0	0	0	0	0	0	0	3,30E-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[7]	kg CO_2 eq.	5,32E+00	3,41E-02	6,51E-03	0	0	0	0	0	0	0	0	0	0	3,09E-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	7,78E+00	8,62E-03	6,63E-03	0	0	0	0	0	0	0	0	0	0	1,59E-03	0
PERM	MJ	2,55E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	8,03E+00	8,62E-03	6,63E-03	0	0	0	0	0	0	0	0	0	0	1,59E-03	0
PENRE	MJ	1,19E+02	5,47E-01	1,13E-01	0	0	0	0	0	0	0	0	0	0	8,26E-02	0
PENRM	MJ.	3,82E+01	0	0	0	0	0	0	0	0	0	0	0	0	00	0
PENRT	MJ	1,57E+02	5,47E-01	1,13E-01	0	0	0	0	0	0	0	0	0	0	8,26E-02	0
SM	kg	1,10E-01	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^3	6,79E-02	6,09E-05	8,15E-05	0	0	0	0	0	0	0	0	0	0	7,94E-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															

[7] 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	7,01E-01	2,25E-02	7,80E-02	0	0	0	0	0	0	0	0	0	0	3,05E-01	0
Hazardous waste disposed	kg	1,01E-03	1,38E-06	9,63E-07	0	0	0	0	0	0	0	0	0	0	1,18E-07	0
Radioactive waste disposed	kg	1,44E-04	3,45E-06	2,74E-07	0	0	0	0	0	0	0	0	0	0	4,56E-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	7,37E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

Group 7

These results are valid for the following products: Air-bur CM XPS 30, Air-bur CM XPS 34, Air-bur CM XPS 40 and Air-bur CM XPS 44

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_2 eq.	6,48E+00	1,06E-01	6,34E-02	0	0	0	0	0	0	0	0	0	0	1,54E-01	0
GWP-biogenic	kg CO_2 eq.	3,33E-02	4,23E-05	1,21E-04	0	0	0	0	0	0	0	0	0	0	1,39E-05	0
GWP-luluc	kg CO_2 eq.	4,15E-03	4,96E-05	1,03E-04	0	0	0	0	0	0	0	0	0	0	1,58E-05	0
GWP-total	kg CO_2 eq.	6,52E+00	1,06E-01	6,36E-02	0	0	0	0	0	0	0	0	0	0	1,54E-01	0
ODP	kg CFC 11 eq.	1,69E-07	2,40E-08	4,49E-09	0	0	0	0	0	0	0	0	0	0	4,24E-09	0
AP	mol H^+ eq.	2,72E-02	4,23E-04	3,97E-04	0	0	0	0	0	0	0	0	0	0	1,26E-04	0
EP-fresh water	kg P eq	9,62E-04	7,93E-06	2,13E-05	0	0	0	0	0	0	0	0	0	0	2,32E-06	0
EP-marine	kg N eq.	4,55E-03	1,23E-04	6,43E-05	0	0	0	0	0	0	0	0	0	0	2,81E-03	0
EP-terrestrial	mol N eq.	4,75E-02	1,35E-03	6,99E-04	0	0	0	0	0	0	0	0	0	0	4,57E-04	0
POCP	kg NMVOC eq.	3,21E-02	4,15E-04	2,24E-04	0	0	0	0	0	0	0	0	0	0	1,63E-04	0
ADP-minerals&metals*	kg Sb eq.	9,02E-06	4,77E-07	1,59E-06	0	0	0	0	0	0	0	0	0	0	4,90E-08	0
ADP-fossil*	MJ	1,35E+02	1,59E+00	9,61E-01	0	0	0	0	0	0	0	0	0	0	3,36E-01	0
WDP*	m^3	4,00E+00	5,08E-03	2,74E-02	0	0	0	0	0	0	0	0	0	0	1,43E-02	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[8]	kg CO_2 eq.	6,22E+00	1,05E-01	6,18E-02	0	0	0	0	0	0	0	0	0	0	1,34E-01	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	6,47E+00	2,66E-02	6,55E-02	0	0	0	0	0	0	0	0	0	0	6,90E-03	0
PERM	MJ	9,17E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	6,56E+00	2,66E-02	6,55E-02	0	0	0	0	0	0	0	0	0	0	6,90E-03	0
PENRE	MJ	1,45E+02	1,69E+00	1,03E+00	0	0	0	0	0	0	0	0	0	0	3,57E-01	0
PENRM	MJ.	5,49E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	2,00E+02	1,69E+00	1,03E+00	0	0	0	0	0	0	0	0	0	0	3,57E-01	0
SM	kg	1,38E-01	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^3	1,00E-01	1,88E-04	7,15E-04	0	0	0	0	0	0	0	0	0	0	3,44E-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															

[8] 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	5,04E-01	6,93E-02	1,44E-01	0	0	0	0	0	0	0	0	0	0	1,32E+00	0
Hazardous waste disposed	kg	2,89E-04	4,25E-06	9,49E-06	0	0	0	0	0	0	0	0	0	0	5,09E-07	0
Radioactive waste disposed	kg	1,16E-04	1,07E-05	2,13E-06	0	0	0	0	0	0	0	0	0	0	1,97E-06	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	2,55E-01

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

Group 8

These results are valid for the following products: Air-bur CM XPS 50, Air-bur CM XPS 54, Air-bur CM XPS 60, Air-bur CM XPS 64, Air-bur CM XPS 80 and Air-bur CM XPS 84

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_2 eq.	8,63E+00	1,47E-01	6,39E-02	0	0	0	0	0	0	0	0	0	0	2,09E-01	0
GWP-biogenic	kg CO_2 eq.	4,60E-02	5,86E-05	1,21E-04	0	0	0	0	0	0	0	0	0	0	1,88E-05	0
GWP-luluc	kg CO_2 eq.	4,86E-03	6,87E-05	1,04E-04	0	0	0	0	0	0	0	0	0	0	2,14E-05	0
GWP-total	kg CO_2 eq.	8,68E+00	1,47E-01	6,41E-02	0	0	0	0	0	0	0	0	0	0	2,09E-01	0
ODP	kg CFC 11 eq.	2,24E-07	3,32E-08	4,69E-09	0	0	0	0	0	0	0	0	0	0	5,73E-09	0
AP	mol H^+ eq.	3,56E-02	5,87E-04	4,02E-04	0	0	0	0	0	0	0	0	0	0	1,71E-04	0
EP-fresh water	kg P eq	1,20E-03	1,10E-05	2,14E-05	0	0	0	0	0	0	0	0	0	0	3,13E-06	0
EP-marine	kg N eq.	5,92E-03	1,71E-04	6,59E-05	0	0	0	0	0	0	0	0	0	0	3,81E-03	0
EP-terrestrial	mol N eq.	6,20E-02	1,87E-03	7,17E-04	0	0	0	0	0	0	0	0	0	0	6,18E-04	0
POCP	kg NMVOC eq.	4,34E-02	5,75E-04	2,29E-04	0	0	0	0	0	0	0	0	0	0	2,21E-04	0
ADP-minerals&metals*	kg Sb eq.	1,00E-05	6,61E-07	1,59E-06	0	0	0	0	0	0	0	0	0	0	6,63E-08	0
ADP-fossil*	MJ	1,81E+02	2,20E+00	9,75E-01	0	0	0	0	0	0	0	0	0	0	4,55E-01	0
WDP*	m^3	5,41E+00	7,04E-03	2,80E-02	0	0	0	0	0	0	0	0	0	0	1,93E-02	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[9]	kg CO_2 eq.	8,28E+00	1,46E-01	6,23E-02	0	0	0	0	0	0	0	0	0	0	1,81E-01	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	9,37E+00	3,68E-02	6,56E-02	0	0	0	0	0	0	0	0	0	0	9,33E-03	0
PERM	MJ	1,59E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	9,53E+00	3,68E-02	6,56E-02	0	0	0	0	0	0	0	0	0	0	9,33E-03	0
PENRE	MJ	1,94E+02	2,34E+00	1,04E+00	0	0	0	0	0	0	0	0	0	0	4,83E-01	0
PENRM	MJ.	7,39E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	2,68E+02	2,34E+00	1,04E+00	0	0	0	0	0	0	0	0	0	0	4,83E-01	0
SM	kg	1,38E-01	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^3	1,35E-01	2,60E-04	7,30E-04	0	0	0	0	0	0	0	0	0	0	4,65E-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															

[9] 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	6,45E-01	9,60E-02	2,40E-01	0	0	0	0	0	0	0	0	0	0	1,78E+00	0
Hazardous waste disposed	kg	2,94E-04	5,88E-06	9,51E-06	0	0	0	0	0	0	0	0	0	0	6,89E-07	0
Radioactive waste disposed	kg	1,51E-04	1,48E-05	2,22E-06	0	0	0	0	0	0	0	0	0	0	2,67E-06	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	2,46E-01

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO2

LCA interpretation

This section presents the interpretation of the results of potential environmental impact of groups 1 and 8, of least and most impact magnitude. The graphs shown below indicate the impact contribution of each life cycle stage to the total impact by category.

Group 1

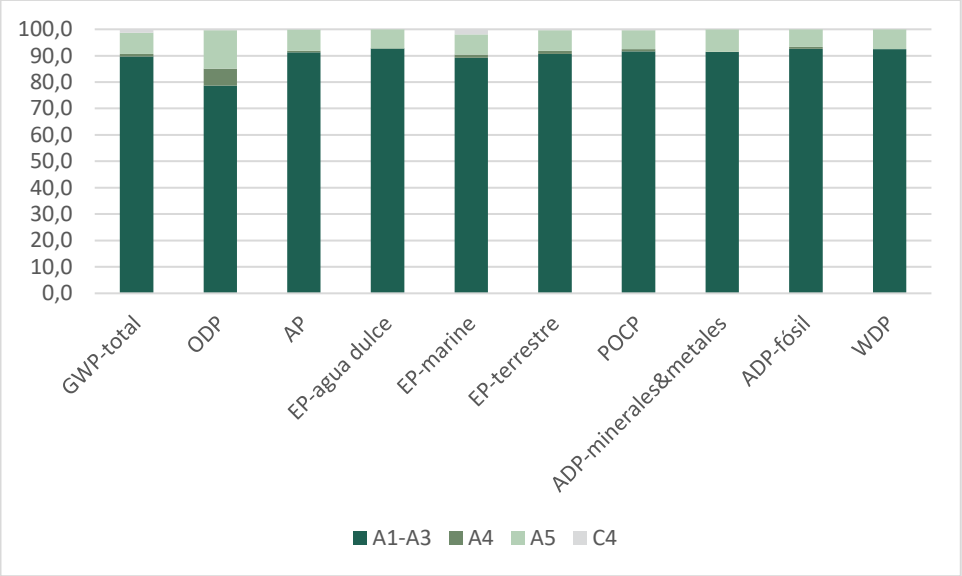


Figure 1. Environmental impact by life cycle stage of Air-bur Termic S

As can be seen in Figure 1, the product stage (A1-A3) is the Life Cycle Stage that has the greatest impact for all the impact categories analyzed, representing between 78,6% (Depletion of stratospheric ozone layer) and 92,6% (Depletion of fossil resources), resulting in an average of 90% of the total life cycle impact of Air-bur Termic S product.

The A5 stage of installation is the second contributor to the total impact, reaching its maximum of 14,6% in the depletion potential of the stratospheric ozone layer. Stage A4 of distribution to customer and stage C4 of final disposal represent a low impact potential, with an average of 1,2% and 0,4%, respectively.

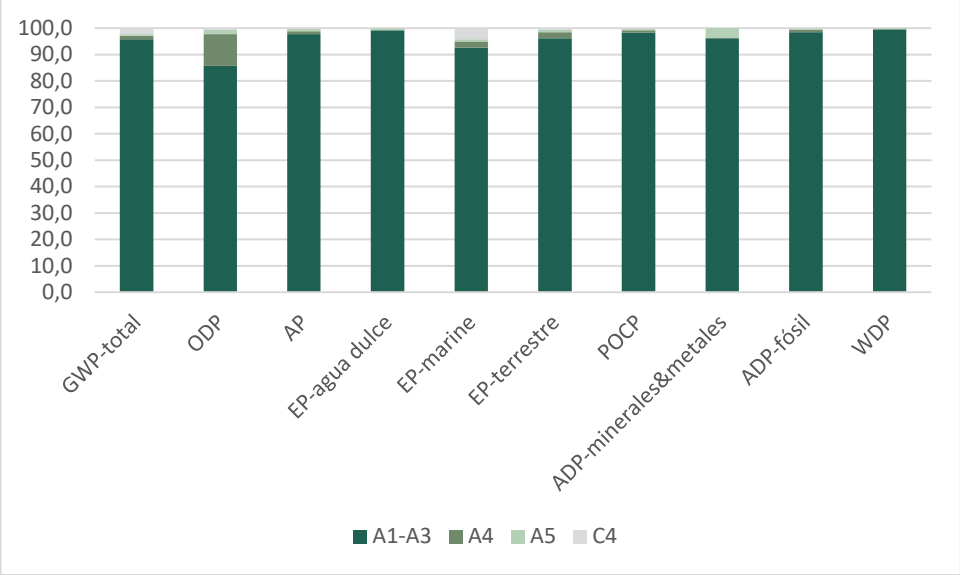


Figura 2. Environmental impact by life cycle stage of Air-bur CM XPS 50, 54, 60, 64, 80 and 84

Figure 2 shows the contribution of impact by life cycle stage to the total impact of the most environmentally impactful group of products.

Similarly to group 1 with the least impact potential, in group 8 the product stage A1-A3 is the stage with the most weight in all the categories analyzed, representing an average of 96% of the total impact.

On the other hand, stage A4 of distribution to the customer has the most notable impacts (14%) associated with the depletion of the ozone layer, while stage A5 of installation has its maximum (3,6%) in depletion of mineral and metal resources. and the C4 of landfill disposal presents a reduced 4,3% in marine eutrophication.

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-005 Thermal Insulation products (EN 16783) (2019-12-20)
- 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: EPD07101

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):

REFLECTIVE THERMAL INSULATORS AIR-BUR TERMIC: LOW-THICKNESS AND XPS.
AISLANTES TÉRMICOS REFLECTIVOS AIR-BUR TERMIC: DE BAJO ESPESOR Y XPS.

with registration number **S-P-06007** in the International EPD® System *(www.environdec.com).*
*con número de registro **S-P-06007** en el Sistema International EPD® (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-005 Thermal Insulation products (EN 16783) (2019-12-20).**
- **UN CPC 369 Other plastics products.**

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Carlos Nazabal Alsua
Manager

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