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Foam sound absorbing panels with textile upholstery

Environmental product declaration

EN ISO 14025:2010
EN 15804:2012+A2:2020
C-PCR TO PCR 2019:14

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absotec
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C-PCR TO PCR 2019:14 The European Regulation EN 15804:2012+A2:2020 as basis for RCP
Independent verification of the declaration and its data, according to EN ISO 14025:2010 Regulation ☐ Internal ☒ External
Verification body AENOR Confía

1. General information

1.1. The company

ABSOTEC ABSORCIÓN ACUSTICA, S.L., hereinafter Absotec, is a company specialized in eliminating reverberation and sounds in indoor spaces. The company aims at enhancing the quality of life of its customers making their spaces acoustically and aesthetically comfortable through the use of innovative and environmentally friendly solutions.

Day to day tasks include following up personally and continuously, from identifying the issue to implementing the right solution.

The main target is to contribute to improve health standards through implementing acoustic solutions that generate wellness and comfort indoors. Absotec aims at being trailblazers by abiding international standards and legal market requirements in a sustainable and efficient manner.

Absotec, independent company in all the process of adapting their sound absorbing products to customer needs, outfits spaces to be nice and healthy, offering acoustic solutions fully designed and manufactured in Spain and applying circular economy criteria and environmentally friendly materials.

To create acoustic solutions means to take care of people's habitats, that is, all the environments where we work, live and share. That is why the company has sustainable design solutions plus an innovative and handmade manufacturing process.

Absotec is now a PYME Innovadora. It's ambition is to offer the best products and services to customers, which is linked to a management and continuous improvement system, guaranteed by UNE-EN-ISO 9001 of Quality management, UNE 166002 of I+D+I Management and UNE-EN-ISO 14006 from Ecodiseño.

1.2. Declaration scope

This environmental product declaration describes environmental information regarding production life cycle from cradle to gate with modules A4, A5, C1-C4 and D (A1-A3, A4, A5, C and D), of foam sound absorbing panels with textile upholstery manufactured by Absotec in the Valladolid (Spain) plant.

The function of the product system described is production of sound absorbing panels for acoustic outfitting of certain spaces.

1.3. Life cycle and conformity.

This EPD has been developed and verified according to complementary RCP C-PCR-014, according to Regulations ISO 14040, ISO 14044, ISO 14025, UNE-EN 15804:2012+A2:2020 and standard rules of the GlobalEPD program.

This EPD includes life cycle stages shown on table 1-1. This EPD is cradle to gate type with modules A4, A5, C y D.

Table 1-1 System limits. Information modules shown

Product stage	A1	Raw material supply	X
	A2	Transportation to premises	X
	A3	Manufacturing	X
Construction	A4	Transportation to site	X
	A5	Installation / Construction	X
Use stage	B1	Use	MNT
	B2	Maintenance	MNT
	B3	Repair	MNT
	B4	Substitution	MNT
	B5	Rehabilitation	MNT
	B6	Use of energy in service	MNT
	B7	Use of water in service	MNT
End of life cycle	C1	Deconstruction / demolition	X
	C2	Transportation	X
	C3	Waste treatment	X
	C4	Elimination	X
	D	Reusing, recovering and/or recycling potential	X

X = Module included in LCA; NR = Non relevant module; MNE = Module not tested

This EPD may not be comparable to others developed in other programs or be in line with other reference documents; precisely may not be comparable with non-developed and verified Declarations according to Regulation UNE-EN 15804.

Likewise, the EPD cannot be comparable if the origin of data is not the same (e. g. data bases), if all modules are not included or if different scenarios are set.

The comparison between construction products must be done with the same function, applying the same functional unit and building level (or architectural / engineering work), that is, including the behavioral pattern of the product throughout its entire life cycle, as well as the specs of section 6.7.2 of the UNE-EN ISO 14025 Regulation.

2. The product

2.1. Identification of the product

This EPD applies to the sound absorbing elements with textile upholstery (panels, baffles, islands, etc.) with variable geometry according to the Absotec® design for the acoustic outfitting of certain spaces.

CPC code: 54790.

2.2. Product performance

Precisely, the manufacturer declares the following information regarding the technical specifications of the product:

- Features of the absorbing component

Density (ISO 845) of 9kg/m3 ±1.5.
Compression resistance (ISO 3386/1): > 9kPa
Traction resistance (ISO 1798): > 120 kPa
Thermal conductivity: ≤ 0,035 W/mK

The foam panel with textile upholstery has 4 layers: a wooden board where the foam sits. Above the foam rests the textile upholstery, and the reverse of the board is covered with a textile trim veil.

- Properties of the acoustic absorption

The foam passed the acoustic absorption test according to ISO 10534-2 standards in a reverberant room with DIN EN ISO 354 standards, with the following acoustic absorption coefficients ($\alpha\rho$):

Table 2-1 Acoustic properties

		Thickness (mm)				
		20	**30**	**40**	**50**	**60**
Frequency (Hz)	**250**	0.21	0.35	0.48	0.63	0.77
	500	0.44	0.63	0.84	0.92	1.02
	1000	0.72	0.85	0.97	1.01	1.02
	2000	0.84	0.82	1.00	1.04	1.03
	NRC	**0.55**	**0.68**	**0.82**	**0.90**	**0.96**

- Fire performance

The panel has a B-S1, d0, fire reaction, according to EN 13501-1 Regulation.

Table 2-2 Classification according to EN 13501-1

EN 13501-1	
Classification	**Value**
Contribution to fire	B (very high)
Smoke opacity	S1 (non-existant)
Flamed drops	d0 (low)

Table 2-3 Fire performance

Fire performance		
Region	**Regulation**	**Classification**
Europe	CEN/TS 45545-2	On demand
	EN 13501-2	B/C
Germany	DIN 4102-1	B1
	DIN 5510-2	S4, ST2, SR2 FED<N
France	NF P 92-507	M1
	NF F 16-101	F4
USA	FMVSS 302	COMPILANT 0 mm/min
	UL 94	V-0 / HF-1
UK	BS 476 PART-7	CLASS 1

- Chemical resistance
  Thanks to its high crosslinking structure, the foam is resistant to all organic solvents. When dealing with acids and alkalis, the resistance has to be checked in certain applications as temperature, exposure time and concentration of all components have a great influence on the resistance of the foam to those means.

2.3. Product composition

The Absotec sound absorbing panels have the following average composition:

Table 2-4 Average composition

Material	% in total weight
Foam	3.42%
Wood	92.84%
Textile	3.69%
Steel	0.06%

During the life cycle of the product no hazardous substances listed on “Candidate List of Substances of Very High Concern (SVHC) for authorization” are used in a percentage higher than 0.1% of the weight of the product.

3. About LCA

3.1. Life cycle analysis

The LCA report for the EPD of the sound foam absorbing panels with textile upholstery from Absotec Absorción Acústica S.L., from October 2022, has been written by Abaleo S.L. with Ecoinvent 3.8 databases (November 2021) and Agribalyse v3.0 plus software SimaPro 9.4.0.2, the most updated version at the time of performing the LCA.

The study was made using data from the Absotec factory in Polígono San Cristóbal, Calle Propano 66, 47012 Valladolid (Spain).

This LCA follows the recommendations and requisites of the ISO international standards ISO 14040:2006, ISO 14044:2006, product Category rule c-PCR TO PCR 2019:14 and the European Regulation UNE-EN 15804:2012+A2:2020.

3.2. Study scope.

The scope of this EPD is the production from cradle to gate with A4, A5, C1-C4 y D (A1-A3, A4, A5, C y D) modules regarding sound absorbing panels from the Ecodiseño range with foam with upholstery to be used as acoustic outfitting in certain spaces.

The specific data for the manufacturing process stem from the Absotec facilities from 2021.

In this LCA the following elements have not been included:

- All equipments with a useful life of > 3 years.
- The construction of the factory buildings and other capital goods. Products used for building maintenance have not been included.
- Business trips from staff.
- Commuting to work or from work (staff).

3.3. Declared unit.

The declared unit is 1 square meter (1 m^2) of sound absorbing material, including its packaging:

- Panel with upholstery: 0.04 m foam and 0.01 wood board.

3.4. Reference Service Life (RSL)

The Reference Service Life (RSL) of the sound absorbing panels has not been specified as it is an EPD from cradle to gate with options.

3.5. Assigning criteria.

According to the RCP criteria:

- When possible, the product system was extended to avoid the assignment of the environmental impacts in the unified multi-output processes.
- When it was not possible to avoid the assignment, both inputs and outputs of the system were placed, according to mass.

No economic assignment criteria were set.

3.6. Exclusion criterion

According to RCP criteria, in this LCA the gross weight/volume of all materials used in the process of manufacturing sound absorbing panels was included, so at least 99% of the weight of the product unit was obtained.

There were no consumption exclusions regarding materials or energy.

3.7. Representativeness, quality and data selection

In order to shape the manufacturing process of the sound absorbing panels, production data from the Absotec factory in Valladolid were used (year 2021), which is a representative year of average production. The following data were obtained: material and energy consumption, waste generation and transportation distances.

When required, data from Ecoinvent 3.8 (November 2021) And Agribalyse v3.0 were used, which are the latest versions available for LCA. Regarding inventory data, to make a model of LCA and to calculate the categories of environmental impact that the RCP requires, software SimaPro 9.4.0.2 was used, which is the most updated version available for this task.

In order to choose the most representative processes, the following criteria were applied:

- Data representative of the technological development really applied on manufacturing processes. In case of not having information, a representative data of the average technology was used.
- Data used were the closest, geographically speaking, or average regionalized.
- The most updated data, when possible.

In order to assess the quality of primary data of the production of the sound absorbing panels from Absotec, assessment semiquantitative criteria of the quality were used, according to the EU and its Guide for Environmental Footprints for Product and Organizations.

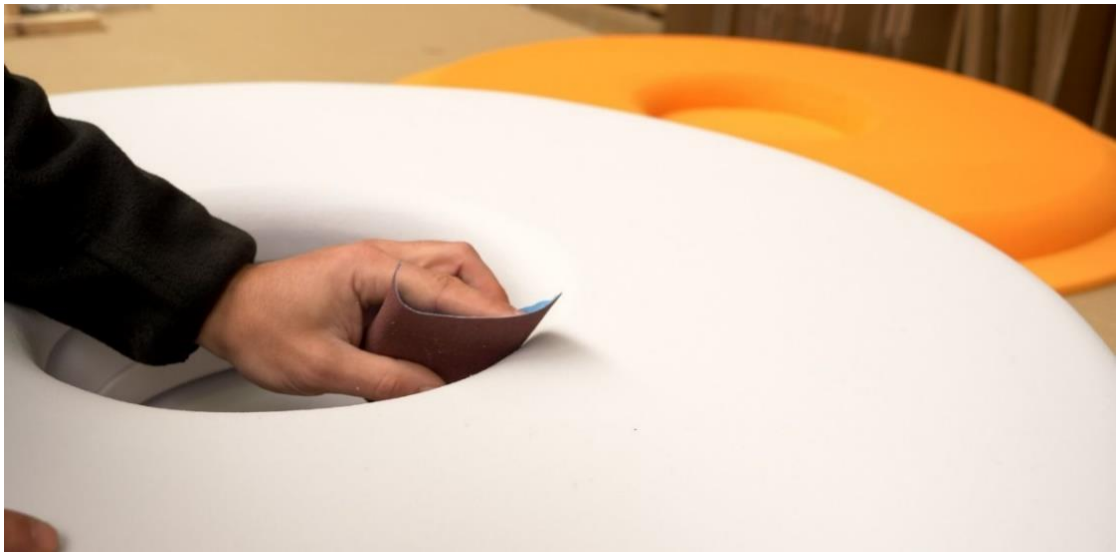
The following results were obtained:

- Very good integrity. Score 1
- Good methodological coherence and suitability. Score 2.
- Very good temporary representativeness. Score 1.
- Good technological representativeness. Score 2.
- Very good geographical representativeness. Score 1.
- Very low data uncertainty. Score 2.

According to previous data, the Data Quality Rating (DQR) has the following value: 9/6 = 1.5, which means that the quality of data is excellent.

For a better understanding of the assessment of the quality of data carried out, the score of every criterion is between 1 and 5 (lesser score, better quality). For the final score, the following table applies:

Data Quality Rating (DQR)	Data global quality level
≤ 1.6	Excellent
1.6 to 2.0	Very good
2.0 to 3.0	Good
3 to 4.0	Fair
> 4	Unsatisfactory



4. System limits, scenarios and additional technical information

The product system show non the LCA of the production of the foam sound absorbing panels with textile upholstery from Absotec is the cradle to gate type, with modules A4, A5, C1-C4 and D. The following production stages were checked:

4.1. Module A1 – Raw material production

This module includes the raw material production process, that is:

- The extraction of sources and raw materials.
- Transportation of raw materials to production/treatment plants.
- Energy and fuel consumption, during the production of raw materials.
- The consumption of other resources (such as water) during the production of raw materials.
- Waste generation, air emissions and discharges to water and land during the production of raw materials.

4.2. Module A2 – Transportation of raw materials to factory

The transportation of all raw materials by road has been considered, from production warehouses (providers) to the Absotec premises. Transportation distances of the raw materials have been provided by Absotec, knowing the location of the plant and the premises of the providers.

4.3. Module A3 - Manufacturing

This module includes:

- The panel manufacturing process.
- The generation of manufacturing waste and transportation to management plants.
- The manufacturing of packages and its transportation, from providers to plants.

Transportation distances of waste materials have been provided by Absotec, fully aware of the location of the premises of the waste management companies.

4.4. Module A4 – Transportation to customer.

For this module, the average transportation of the products has been considered, from manufacturing locations to final premises, by truck.

Table 4-1 Module A4 parameters

Parameters	Quantity (per declared unit)
Fuel liters: - Diesel in EURO 5 truck (cargo =29.96)	0.12859 l per km
Average distance:	262 km
Capacity usage (including empty return)	45 %
Apparent density of carried products	-
Serviceable capacity factor	-

4.5. Module A5 – Installation

Spirit level and drills are the tools needed for installation, also the steel suspension system plus transportation to customer premises.

Table 4-2 Module A5 parameters

Parameters	Quantity (per functional unit)
Secondary installation materials: - Suspension system	0.2 kg
Water consumption	-
Consumption: - Electric drill - Spirit level	0.0270 kWh 0.0015 kWh
Output materials	-
Emissions	-

4.6. Module C1 – Deconstruction / demolition

In this LCA, the deconstruction module (C1) has not been considered for quantitative analysis. The consumption of material and energy for deconstruction of panels and supplementary parts are not relevant regarding the building or the civil construction.

4.7. Module C2: Transportation to waste management plants

All sound absorbing panels are carried by road and average of 50 km to the nearest waste management plant, with EURO5, 16-32 tons trucks.

4.8. Modulo C3 – Waste treatment and Module C4 – Waste disposal.

In order to determine the recycling, landfill and incineration costs of the sound absorbing panels, criteria of the Part C of the Annex 2 V2.1 (May, 2020) regarding the *Circular Footprint Formula* of the methodology of the Carbon footprint of the European Union (*RECOMMENDATION (UE) 2021/2279 OF THE EUROPEAN COMMISSION from December 15th, 2021, on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organizations.)*

The following end of useful life scenarios apply, regarding values show non previous tables for every panel type:

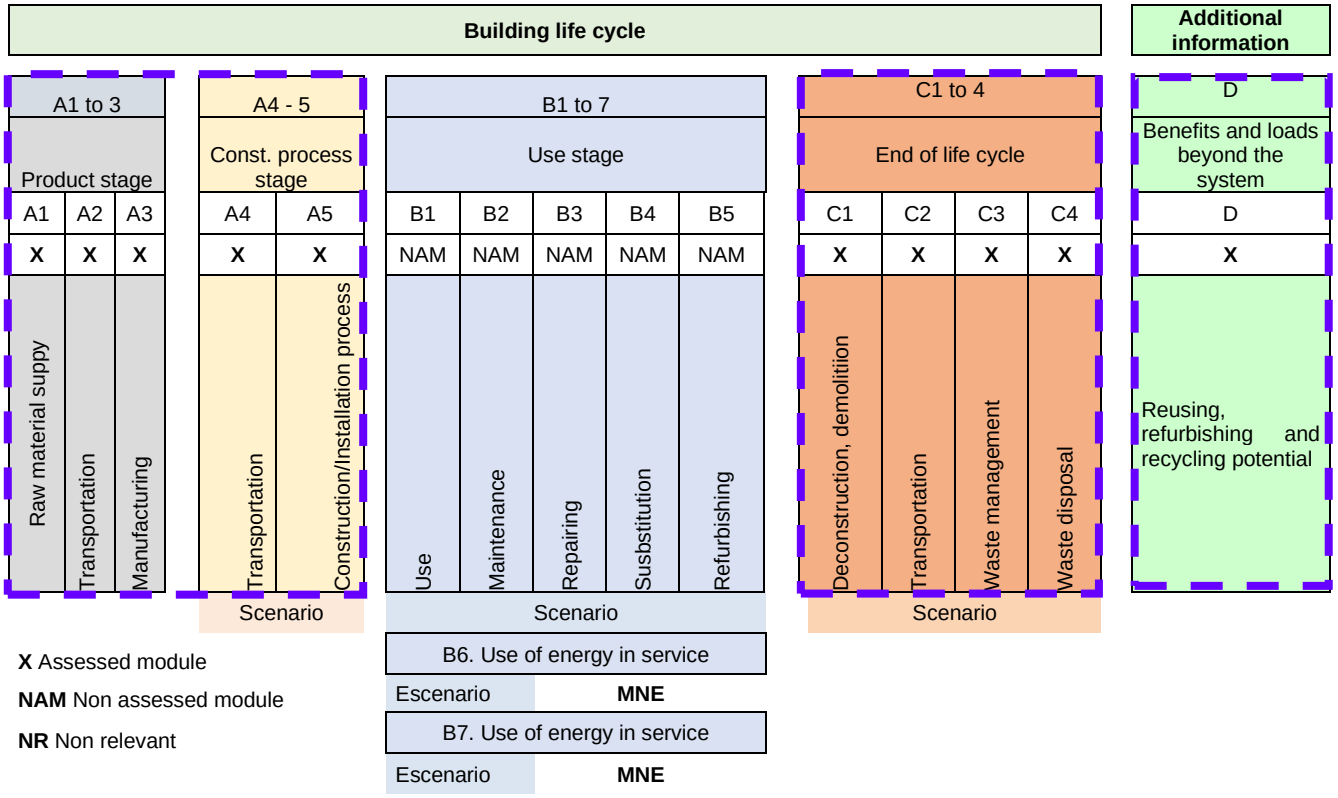
Table 4-3 Module C parameters

Parameter	Value (per declared unit)
Demolition	The consumption of materials and energy for deconstruction of panels and supplementary parts are not relevant regarding the building or the civil construction
Pick up process by type	10.848 kg picked up separately
	0 kg of mixed construction waste
Recovery system by type	0 kg for reusing
	0.17 kg of steel to recycle
	0 kg for energetic valorization
Elimination, specified by type	9.182 kg for final disposal (landfill); 1.495 kg for final disposal (incineration)
Transportation scenarios	EURO5,16-32 tons trucks: - All carried by road an average of 50 km to the nearest waste management plant.

4.9. Module D – Benefits beyond the system

The steel recycling recovery coefficient has been applied, according to Part C of Annex 2 V2.1 (may, 2020) of the *Circular Footprint Formula* of the methodology of the Carbon footprint of the European Union (*RECOMMENDATION (UE) 2021/2279 OF THE COMMISION from December, 15 2021,* on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organizations): 100% of steel sent to recycle.

Table 4-4 Stages and information modules for building evaluations. Life cycle of the building



X Assessed module

NAM Non assessed module

NR Non relevant

5. Declaration of environmental parameters of LCA and LCI.

Environmental impact parameters for 1m2 of foam sound absorbing panel with textile upholstery

Foam panel with upholstery *Functional Unit: 1 m²*												
Parameter	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq	6.32E+00	4.51E-01	4.96E-01	**7.27E+00**	1.42E+00	1.08E+00	NR	7.49E-02	0.00	7.89E-01	-3.49E-01
GWP-biogenic	kg CO_2 eq	5.42E-01	2.62E-05	2.39E-02	**5.66E-01**	8.22E-05	4.13E-04	NR	4.38E-06	0.00	4.28E-05	-2.56E-04
GWP-luluc	kg CO_2 eq	1.55E-02	3.72E-06	3.05E-06	**1.55E-02**	1.14E-05	1.57E-04	NR	6.06E-07	0.00	8.30E-06	-1.26E-04
GWP-total	kg CO_2 eq	6.88E+00	4.51E-01	5.20E-01	**7.85E+00**	1.42E+00	1.08E+00	NR	7.49E-02	0.00	7.89E-01	-3.49E-01
ODP	kg CFC-11 eq	1.94E-06	1.06E-07	1.59E-08	**2.06E-06**	3.34E-07	2.26E-07	NR	1.78E-08	0.00	9.57E-09	-1.41E-08
AP	mol H+ eq	4.53E-02	1.75E-03	9.67E-04	**4.80E-02**	4.55E-03	5.81E-03	NR	2.60E-04	0.00	6.38E-04	-1.39E-03
EP-freshwater	kg P eq	3.09E-04	2.51E-07	3.56E-07	**3.10E-04**	7.58E-07	6.73E-06	NR	4.04E-08	0.00	5.33E-07	-1.60E-05
EP-marine	kg N eq	9.92E-03	5.90E-04	4.88E-04	**1.10E-02**	1.38E-03	2.25E-03	NR	8.33E-05	0.00	2.91E-04	-2.72E-04
EP-terrestrial	mol N eq	1.42E-01	6.52E-03	5.01E-03	**1.53E-01**	1.52E-02	2.47E-02	NR	9.16E-04	0.00	3.05E-03	-3.14E-03
POCP	kg NMVOC eq	3.29E-02	1.91E-03	1.38E-03	**3.62E-02**	4.20E-03	7.07E-03	NR	2.50E-04	0.00	7.77E-04	-1.50E-03
ADP-minerals&metals [2]	kg Sb eq	2.29E-06	2.07E-08	7.63E-09	**2.31E-06**	6.12E-08	1.22E-07	NR	3.26E-09	0.00	1.65E-08	-4.65E-06
ADP-fossil [2]	MJ, v.c.n.	1.15E+02	6.31E+00	1.04E+00	**1.22E+02**	1.99E+01	1.44E+01	NR	1.06E+00	0.00	6.40E-01	-3.28E+00
WDP [2]	m^3 eq	7.30E+00	-5.87E-04	1.42E-02	**7.31E+00**	-1.90E-03	5.63E-02	NR	-1.01E-04	0.00	1.18E-01	-7.43E-02

GWP - total (kg CO_2 eq): Global warming potential; **GWP - fossil (kg CO_2 eq)**: Global warming potential of fossil fuels; **GWP - biogenic (kg CO_2 eq)**: Global warming potential - biogenic; **GWP - luluc (kg CO_2 eq)** Global warming potential of use and land use change; **ODP (kg CFC-11 eq)**: Stratospheric zone layer depletion potential; **AP (mol H+ eq)**: Acidification potential with excess build up; **EP-freshwater (kg P eq)**: Eutrofization potential, a fraction of nutrients that reach fresh water; **EP-marine (kg N eq)**: Eutrofization potential, a fraction of nutrients that reach marine water; **EP-terrestrial (mol N eq)**: Eutrofization potential with excess build up; **POCP (kg NMVOC eq)**: Tropospheric ozone build-up potential; **ADP-minerals&metals (kg Sb eq)**: Abiotic depletion potential for non-fossil resources; **APD-fossil (MJ, v.c.n)**: Abiotic depletion potential for non-fossil resources; **WDP (m^3 eq)**: Water depletion potential (user), weighted water depletion consumption.

Table 5-1 Additional parameters of environmental impact defined by UNE-EN 15804 Regulation for the production of 1 m^2 of foam sound absorbing panel with textile upholstery.

Foam panel with upholstery *Functional Unit: 1 m^2*											
Parameters	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease index	5.72E-07	3.65E-08	1.15E-08	**6.20E-07**	7.46E-08	1.08E-07	NR	5.59E-09	0,00	9.47E-09	-2.49E-08
IRP [1]	kBq U235 eq	3.06E-01	2.75E-02	3.58E-03	**3.37E-01**	8.66E-02	6.89E-02	NR	4.61E-03	0,00	2.05E-03	-6.06E-03
ETP-fw [2]	CTUe	1.29E+02	2.39E+00	1.55E+00	**1.33E+02**	7.58E+00	6.11E+00	NR	4.30E-01	0,00	3.74E+00	-9.23E+00
HTP-c [2]	CTUh	5.10E-08	2.55E-10	7.73E-11	**5.13E-08**	9.92E-11	6.41E-09	NR	6.04E-12	0,00	1.91E-10	-2.23E-09
HTP-nc [2]	CTUh	7.95E-08	4.05E-09	4.74E-09	**8.83E-08**	9.94E-09	8.88E-09	NR	7.03E-10	0,00	7.99E-09	-7.94E-09
SQP [2]	Pt	3.91E+02	1.81E-02	2.94E-02	**3.91E+02**	5.36E-02	2.36E-01	NR	2.85E-03	0,00	4.71E-01	-5.75E-01

PM (Disease index): Disease index due to particulated matter emissions; **IRP (kBq U235 eq)**: Efficience of exposition of human potential related to U235; **ETP-fw (CTUe)**: Comparative potential of toxic unit for ecosystems – fresh water; **HTP-c (CTUh)**: Comparative potential of toxic unit for ecosystems – carcinogenic effects; **HTP-nc (CTUh)**: Comparative potential of toxic unit for ecosystems – non carcinogenic effects; **SQP (Pt)**: Soil quality potential.

Warning 1. This impact category deals mainly with the possible impacts of lower dosages of the ionizing radiations on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents or occupational exposure due to radioactive waste disposal on subterranean premises. The ionizing radiation potential on land, due to radon or other construction materials is not included here.

Warning 2. The results of this environmental impact indicator must be carefully taken into account, as result uncertainty is high and experience with this parameter is limited.

The results of estimated impact are relative and do not indicate the final value of impact categories, or reference threshold values, safety margins or risks.

Use of resources of foam panel with textile upholstery

Upholstery foam panel *Functional unit: 1 m²*												
Parameter	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ, v.c.n.	7.84E+01	8.12E-03	7.56E-03	**7.84E+01**	2.52E-02	2.19E-01	NR	1.63E-03	0.00	1.88E-02	-3.33E-01
PERM	MJ, v.c.n.	3.89E+01	1.26E-03	9.49E-04	**3.89E+01**	3.60E-03	1.88E-02	NR	2.32E-04	0.00	5.48E-03	-2.50E-02
PERT	MJ, v.c.n.	1.17E+02	9.39E-03	8.51E-03	**1.17E+02**	2.88E-02	2.38E-01	NR	1.86E-03	0.00	2.43E-02	-3.58E-01
PENRE	MJ, v.c.n.	1.74E-03	0.00	0.00	**1.74E-03**	0.00	0.00	NR	0.00	0.00	0.00	0.00
PENRM	MJ, v.c.n.	1.31E+02	5.25E+00	1.07E+00	**1.37E+02**	1.67E+01	1.44E+01	NR	1.08E+00	0.00	6.72E-01	-4.20E+00
PENRT	MJ, v.c.n.	1.31E+02	5.25E+00	1.07E+00	**1.37E+02**	1.67E+01	1.44E+01	NR	1.08E+00	0.00	6.72E-01	-4.20E+00
SM	kg	0.00	0.00	0.00	**0.00**	0.00	0.00	NR	0.00	0.00	0.00	0.00
RSF	MJ, v.c.n.	0.00	0.00	0.00	**0.00**	0.00	0.00	NR	0.00	0.00	0.00	0.00
NRSF	MJ, v.c.n.	0.00	0.00	0.00	**0.00**	0.00	0.00	NR	0.00	0.00	0.00	0.00
FW	m3	2.90E-02	2.61E-04	1.41E-03	**3.07E-02**	8.30E-04	1.07E-03	NR	5.36E-05	0.00E+00	2.25E-03	-1.12E-03

PERE (MJ, v.c.n.): Use of renewable primary energy excluding resources of renewable primary energy used as raw material; **PERM (MJ, v.c.n.):** Use of primary renewable energy as raw material; **PERT (MJ, v.c.n.):** Total use of renewable primary energy; **PENRE (MJ, v.c.n.):** Use of non-renewable primary energy, excluding the resources of non-renewable primary energy used as raw material; **PENRM (MJ, v.c.n.):** Use of non-renewable primary energy as raw material; **PENRT (MJ, v.c.n.):** Primary energy non-renewable total use; **SM (kg)**: Secondary material use; **RSF (MJ, v.c.n.):** Use of secondary renewable fuels; **NRSF (MJ, v.c.n.):** Use of non-renewable secondary fuels; **FW (m^3)**: Net use of tap water.

Waste categories for 1m2 of foam panel with textile upholstery

Upholstery foam panel *Functional unit: 1 m^2*											
Parameter	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	kg	6.40E-04	1.47E-05	4.75E-06	**6.59E-04**	4.33E-05	3.54E-05	NR	2,79E-06	0.00	1.96E-06	-2.72E-05
NHWD	kg	1.77E-01	2.82E-04	4.13E-02	**2.19E-01**	8.64E-04	7.95E-02	NR	5,57E-05	0.00	9.57E+00	-1.38E-01
RWD	kg	2.83E-04	3.70E-05	5.73E-06	**3.25E-04**	1.18E-04	1.01E-04	NR	7,59E-06	0.00	3.09E-06	-5.94E-06

HWD (kg): Hazardous waste disposed; **NHWD (kg)**: Non-hazardous waste disposed; **RWD (kg)**: Radioactive waste disposed

Output flows for 1 m2 of foam panel with textile upholstery

Upholstery foam panel *Functional unit: 1 m^2*												
Parameter	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
CRU	kg	0.00	0.00	0.00	**0.00**	0.00	0.00	NR	0.00	0,00	0.00	0.00
MFR	kg	0.00	0.00	0.00	**0.00**	0.00	3.55E-01	NR	0.00	0,00	0.00	0.00
MER	kg	0.00	0.00	0.00	**0.00**	0.00	0.00	NR	0.00	0,00	0.00	0.00
EE	MJ	0.00	0.00	0.00	**0.00**	0.00	0.00	NR	0.00	0,00	0.00	0.00

CRU (kg): Components for reusing; **MFR (kg)**: Recycling materials; **MER (kg)**: Materials for energetic valorization; **EE (MJ)**: Exported energy

Impact results are approximate and do not reflect the final value of impact categories, threshold values, safety margins or risks.

6. Additional environmental information.

6.1. Emissions to indoor air

The manufacturer declares that the noise absorbing panels with textile upholstery do not generate significant indoor air emissions during its life cycle.

6.2. Discharge to land and water

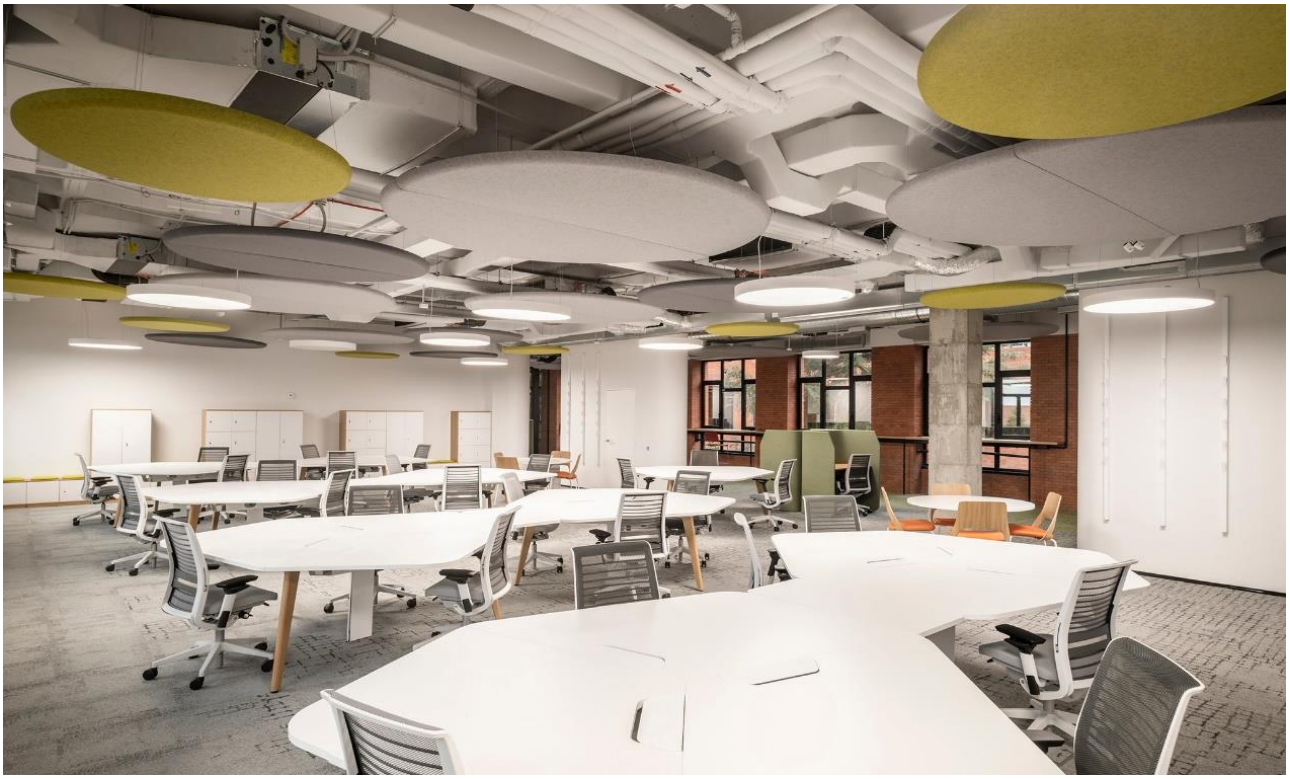
The manufacturer declares that the foam sound absorbing panels with textile upholstery do not generate emissions to land or water, throughout their life cycle.

6.3. Biogenic carbon content

Following the reference rule, the following declaration of biogenic carbon content of foam noise absorbing panels with textile upholstery and their packaging applies

Table 6-1 Biogenic carbon content

Element	Biogenic carbon	Uds.	Result per functional unit
Panel with upholstery	Product	Kg C	0.00213
	Packag.	Kg C	0.00241



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[4] UNE-EN ISO 14025:2010 Environmental labels and Declarations. Type III environmental declarations. Principles and procedures (ISO 14025:2006).

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