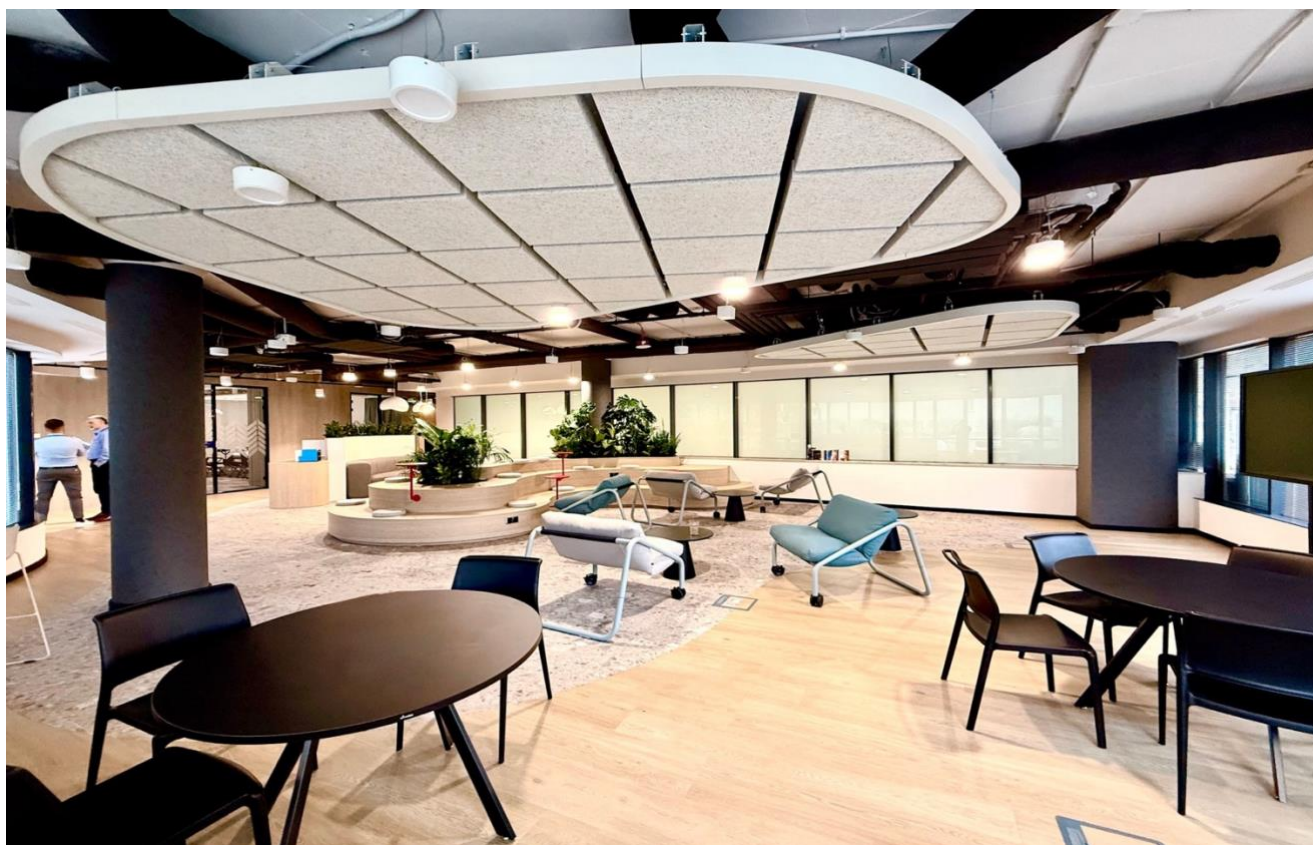


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Product name:
Affice Acoustic Panels



Manufacturer:
ARC-T Sp. z o.o.

office

Published on 10 September 2026
Valid until 10 September 2031

GENERAL INFORMATION

EPD OWNER

Manufacturer / EPD Holder	ARC-T Sp. z o.o.
Address	ul. Wawelska 12/55, 91-839 Łódź, POLAND
Contact details	Piotr Skusiewicz biuro@affice.pl
Website	https://affice.pl/

PRODUCT IDENTIFICATION

Product name	Affice Acoustic Panels
Place(s) of production	POLAND

EPD INFORMATION

EPD Polska program operator	Multicert Sp. z o.o. Ul. Mydlarska 47, 04-690 Warszawa, Poland www.epd.org.pl , epd@epd.org.pl
EPD standards	This EPD is in accordance with EN 15804+A2 and ISO 14025 standards.
Product category rules	The CEN standard EN 15804+A2 serves as the core PCR.
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☒ External verification
EPD verifier	Izabela Sztamberek-Sochan, Ph.D.
EPD number	EPD-P 02.09.2026
Registration:	EPD Polska www.epd.org.pl
Publishing date	10 September 2026
EPD valid until	10 September 2031
Reasons for performing LCA	B2B
Accountability	The EPD Holder is responsible for the information provided and evidence. Multicert Sp. z o.o. does not hold responsibility for the manufacturer information, life cycle assessment data nor supporting evidence.

EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

COMPANY INFORMATION

HOLDER OF THE EPD

ARC-T Sp. z o.o.

ul. Wawelska 12/55, 91-839 Łódź,
POLAND

COMPANY PROFILE

Affice is a brand of ARC-T Sp. z o.o., based in Łódź, Poland, specializing in the design and manufacture of acoustic interior finishing elements made from PET felt. The company designs and produces wall and ceiling panels, spatial 3D panels, partitions, and acoustic lamps in Poland, shaping acoustic comfort in office, commercial, and public spaces.

The Affice catalogue includes more than 50 sound-absorbing products, made largely from recycled materials. Affice combines contemporary design with acoustic functionality and a personalization-driven approach, offering both catalogue solutions and individual projects developed together with architects and investors. Products can be dyed in any color and printed with any graphic, texture, or logo using UV printing technology. The company's machinery enables cutting, V-cut and oscillating-knife die-cutting, thermoforming, and lamination.

ARC-T designs its Affice products around a circularity-driven manufacturing model: panels recovered at the end of their first service life are sorted by condition and reintegrated into new production. Panels suitable for refreshing are cleaned and re-dyed by a specialised service provider and returned to service as complete finished products, while panels not suitable for refreshing are supplied, in their reclaimed state, as the backing layer of layered panel systems assembled at the building site. This allows Affice to deliver fully performing, design-flexible acoustic panels while reducing dependence on virgin material inputs, without compromising product quality, aesthetics, or performance.

PRODUCT INFORMATION

PRODUCT DESCRIPTION

Affice acoustic panels are built around this circular material strategy. Panels recovered at the end of their first service life are sorted by condition and reintegrated into production in one of two ways. Panels suitable for refreshing are cleaned and re-dyed by a specialised service provider and returned to service as complete finished products. Panels not suitable for refreshing are supplied, in their reclaimed state and without refreshing, as the backing layer of layered panel systems, positioned behind a facing of newly produced, high-recycled-content PET board and joined to it on site during installation. Both declared product streams deliver the same functional, acoustic, and aesthetic performance as a conventional PET felt panel, demonstrating that high-recycled-content and reclaimed material inputs can match the quality of products made from conventional materials.

Acoustic Panels made from Reclaimed Used PET Panels: produced entirely from PET felt panels reclaimed from existing installations. The reclaimed panels are collected, cleaned, surface-repaired, and re-dyed, yielding renewed PET felt panels that are cut and finished into the final product.

Acoustic Panels made from Recycled PET Fiber Boards: supplied as a layered system built from two material inputs. PET felt board produced from recycled PET fiber (>60% recycled content), supplied by an external board producer, forms the visible facing layer. Reclaimed PET felt recovered from dismantled installations, customer returns and larger offcuts forms the backing layer; this material is not suitable for refreshing as a complete panel and therefore does not pass through the external cleaning and re-dyeing step, as the backing layer is not visible and its surface condition does not affect product performance. Both layers are cut and finished separately at ARC-T and are joined at the building site during installation, predominantly by mechanical fastening. Both product streams are processed through cutting, die-cutting, thermoforming, and optional UV printing into finished products: wall and ceiling panels, spatial 3D panels, partitions, and decorative-acoustic elements.

PRODUCT APPLICATION

The products provide sound-absorbing and sound-insulating functions, improving indoor acoustic comfort by reducing reverberation and damping sound. They are used in offices, coworking spaces, and public, educational, and commercial buildings, both in new fit-outs and in the renovation of existing spaces.

PRODUCT STANDARDS

The product complies with:

ISO 11654:1997 -Acoustics – Sound absorbers for use in buildings – Rating of sound absorption

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

EN 13501-1:2018 (PN-EN 13501-1:2019-02) - Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests.

ADDITIONAL TECHNICAL INFORMATION

Reaction to fire in accordance with EN 13501-1:2018 (PN-EN 13501-1:2019-02), based on classification reports issued by CNBOP-PIB (National Institute of Fire Protection, Poland): class B-s1, d0 for panels mechanically fixed without an air gap to a substrate of reaction-to-fire class A1 or A2 (report 112/BW/22); class B-s2, d0 for panels on class A1 or A2 substrates and for free-standing applications such as baffles (report 111/BW/22).

Panel thickness: 9 mm and 12 mm (main board types).

Standard board format: 2950 × 1220 mm; products are cut to size and shape to order.

Nominal density: 200 kg/m³ (±10%), applicable to both panel thicknesses. Corresponding surface weight and board weight by thickness are given under DECLARED UNIT section below.

Further information can be found at <https://affice.pl/>

Reference Service Life (RSL): 10 years (under normal indoor conditions).

PRODUCT RAW MATERIAL COMPOSITION

Acoustic Panels made from Reclaimed Used PET Panels

Material	Share
Reclaimed PET felt (post-use panels)	100%

Acoustic Panels made from Recycled PET Fiber Boards

Material	Share
PET felt board (externally produced, facing layer)	~56%
— of which recycled PET fibre	≥60% of board mass
— of which virgin bicomponent PET/PBT binder fibre	≤40% of board mass
Reclaimed PET felt (post-use panels, backing layer)	~44%

Additives (dyes, surface repair materials, antistatic masterbatch): <1% by mass – not listed separately in the content declaration due to their total content below 1% by mass.

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0.1% (1000 ppm).

PRODUCT LIFE-CYCLE

RAW MATERIALS ACQUISITION AND TRANSPORT (A1, A2)

Module A1 covers the supply of raw materials for the two declared product streams. For Acoustic Panels made from Reclaimed Used PET Panels, the sole material input is PET felt panels reclaimed from existing installations. The gross material input amounts to approximately 1.06 kg per declared unit of 1 kg finished product, accounting for production offcuts (approximately 6% by mass) generated during cutting and finishing at ARC-T. In accordance with EN 15804+A2 §6.4.3, reclaimed panels enter the system under the cut-off approach, carrying no upstream environmental burden from their original production; only collection transport and refreshing (cleaning, surface repair, re-dyeing by a specialised service provider) are accounted for.

For Acoustic Panels made from Recycled PET Fiber Boards, the main inputs are PET felt panels reclaimed from existing installations (forming the backing layer) and PET felt board produced by an external board producer (forming the facing layer). Module A1 covers the full upstream production of this board, including the supply of raw fibres, the thermal bonding process at the board producer's facility, and the treatment of production scraps generated during board manufacturing. The board producer's own inbound transport of raw fibres to its facility — including sea and road freight for the imported bicomponent binder fibre is aggregated within this single upstream input and is accounted for within Module A1.

The board combines recycled PET fiber, modelled under the cut-off approach (burdens from the previous product system excluded; processes required to supply usable recycled fibre, including sorting and fibre preparation, included in Module A1), with a bicomponent PET/PBT binder fiber, which is a virgin material modelled with its full upstream production burden.

Module A2 includes the transport of the finished PET felt board from the board producer to ARC-T's facility in Poland, the transport of packaging materials to ARC-T, and the collection transport of reclaimed PET felt panels from dismantling sites. Transport is carried out by road.

MANUFACTURING (A3)

Module A3 covers the conversion of incoming materials into finished acoustic panels. It includes processing at ARC-T's facility in Łódź and, where applicable, cleaning, surface repair, re-dyeing and UV printing carried out by external service providers.

The refreshing service provider cleans, surface-repairs, and re-dyes reclaimed PET felt panels that are in sufficiently good condition to be returned to service as complete finished products (Acoustic Panels made from Reclaimed Used PET Panels). Reclaimed panels used as the backing layer in Recycled PET Fiber Board panels do not pass through the refreshing step, as the backing layer is not visible and its surface condition does not affect product performance.

At ARC-T, the incoming materials are cut, die-cut, thermoformed and UV-printed (where specified; UV printing is carried out sporadically by an external service provider) into finished acoustic panels, 3D spatial elements, partitions, and decorative-acoustic elements. Manufacturing is powered by a combination of grid electricity and on-site photovoltaic generation, with a heat pump used for process heating/cooling and an electric forklift for internal material handling.

Production offcuts, amounting to approximately 6% of input mass for both product streams, are segregated as clean PET. Approximately 90% by mass is sent for energy recovery at an industrial incineration facility located approximately 15 km away (Materials for Energy Recovery, MER); the remaining 10% is directed to other product lines manufactured at ARC-T's facility (Components for Re-use, CRU), exiting the declared product system. The environmental burdens of waste incineration are included in Module A3, while the recovered energy is credited in Module D as avoided conventional energy generation.

Transport to the incineration facility is accounted for in Module A3. No lamination, pressing or bonding of layers is carried out at ARC-T. Where a product is supplied as a layered system, the facing and backing layers are cut separately and joined at the building site during installation, which falls under module A5 and is not declared in this EPD.

PACKAGING AND DISTRIBUTION (A4)

Finished panels are packaged using LDPE stretch film, PE tape, cardboard, and wooden pallets (Euro-pallet type, modelled as net additions to a circulating pallet pool). In accordance with EN 15804+A2, the production of packaging materials is accounted for in Module A1; Module A4 covers only the transport of finished products to customers. Packaging materials (cardboard and wooden pallets) make a small negative contribution to GWP-biogenic within Module A1, reflecting temporarily stored biogenic carbon; for Acoustic Panels made from Reclaimed Used PET Panels this packaging contribution is visible as a net negative Module A1 GWP-biogenic result, while for Acoustic Panels made from Recycled PET Fiber Boards it is outweighed by other Module A1 contributions, resulting in a net positive value.

Products are distributed to customers by lorry, over an average distance of 222.5 km for Acoustic Panels made from Recycled PET Fiber Boards and 159 km for Acoustic Panels made from Reclaimed Used PET Panels.

END OF LIFE (C1–C4) AND MODULE D

Module C1: at the end of their service life, panels are assumed to be manually dismantled on-site using electric power screwdrivers, at a measured energy consumption of 0.00059 kWh per kilogram of product, based on site-specific data provided by ARC-T (2024).

Module C2: dismantled panels are transported approximately 50 km by lorry (>16 t, EURO 6 standard) to a local landfill site. Module C2 accounts for the environmental impacts of this transportation.

Module C3 assumes mechanical pre-treatment (sorting/size reduction) of dismantled panels prior to disposal.

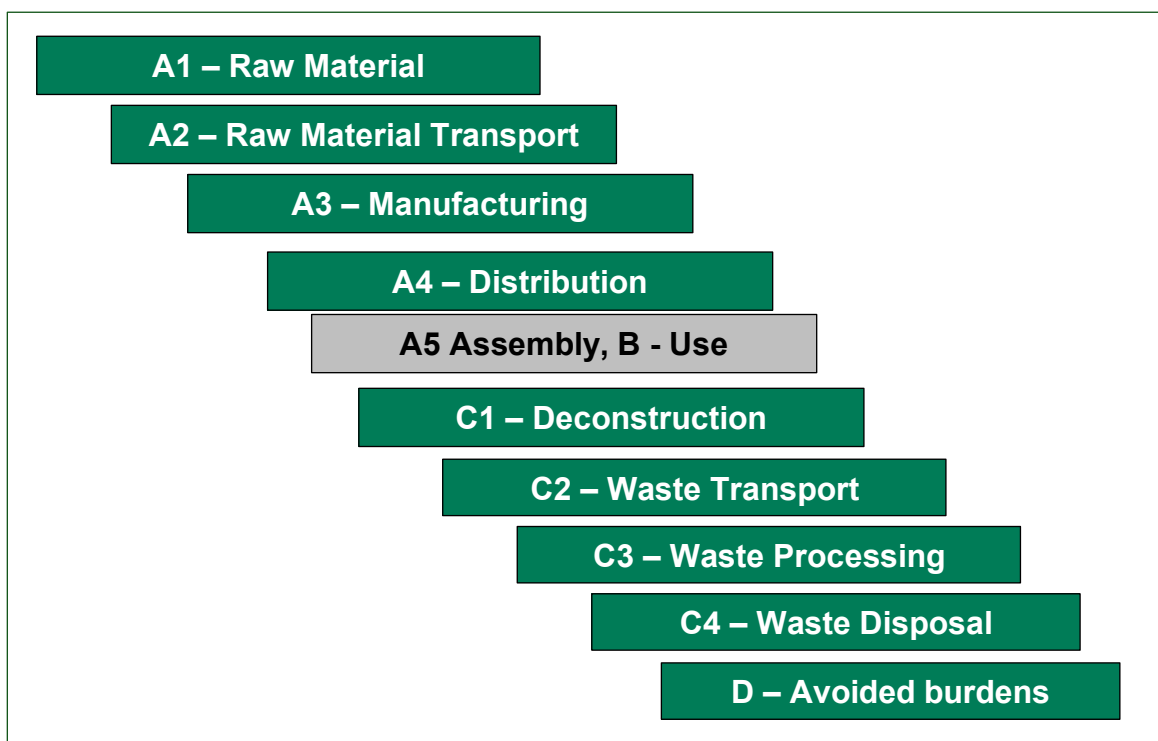
Module C4 reflects the final disposal of 100% of the panel mass in sanitary landfill. This conservative default scenario is applied because not every panel sold is guaranteed to return to ARC-T's take-back programme; for panels whose end-of-life pathway is unknown or not guaranteed, a landfill scenario without material recovery is adopted, consistent with the precautionary principle.

Alternative end-of-life pathways were evaluated, including energy recovery through incineration. For this material composition (thermally bonded PET/PET-PBT felt), landfill was found to represent the more conservative scenario among technically feasible disposal options and is therefore adopted for the declared results.

Module D includes the potential environmental benefits associated with the incineration of production scraps generated at the board producer's facility and of production offcuts generated at ARC-T. The recovered energy is assumed to substitute conventional grid electricity and heat generation. No benefit is credited for panel disposal at end of life (landfill without energy recovery), and no benefit is credited for the recycled or reclaimed content of the declared products, since the entire background model applies the cut-off approach consistently: burdens from the previous product systems of recycled and reclaimed materials are excluded under the cut-off approach, and no corresponding credit is claimed elsewhere for enabling their reuse.

ARC-T operates an active panel take-back and refreshing programme, which extends the service life of a significant share of products; this circular-economy practice is described here qualitatively and is not reflected numerically in the conservative C1–C4 end-of-life results, which represent panels that have reached the true end of their usable life.

Diagram 1 - Life cycle stages:



LIFE-CYCLE ASSESSMENT

LIFE-CYCLE ASSESSMENT INFORMATION

Reference period	2024 year
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DECLARED UNIT

Declared unit	1 kg
Mass per declared unit	1 kg

The declared results represent the production-weighted average for each product stream, based on 2024 manufacturing data. The declaration covers all product variants within each stream — including panels of 9 mm and 12 mm thickness, cut-to-size shapes, thermoformed elements, and optionally UV-printed finishes — as these share the same material composition and are processed using the same production inputs at ARC-T's facility.

Surface weight by thickness (based on nominal density 200 kg/m³, ±10%):

Thickness	Surface weight	Weight per standard board (2950×1220 mm)
9 mm	~1.8 kg/m ²	~6.5 kg
12 mm	~2.4 kg/m ²	~8.6 kg

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0,00
Biogenic carbon content in packaging, kg C	0,01

SYSTEM BOUNDARY

The scope of the EPD is cradle-to-gate with modules C1–C4 and D, and optional module A4. The modules A1 (Raw material supply), A2 (Transport) and A3 (Manufacturing), A4 (Distribution); C1 (Deconstruction), C2 (Waste Transport), C3 (Waste Processing), C4 (Waste Disposal) and D (Avoided burdens) are included in the study.

Product stage			Construction process stage		Use stage							End of life stage				Loads and Benefits beyond the system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	MND	MNR	MNR	MNR	MNR	MNR	MNR	MNR	X	X	X	X	X
Raw materials	Transport	Manufacturing	Distribution	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction	Waste transport	Waste processing	Disposal	Loads and Benefits beyond system boundary

Modules not declared = MND. Modules not relevant = MNR.

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are mandatory under EN 15804:2012+A2:2019. The study does not exclude any hazardous materials or substances.

The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes for which data are available are included in the calculation. No individual excluded input or output exceeds 1% of the total mass or energy flows, and the total excluded flows do not exceed 5%. The life cycle analysis includes all industrial processes from raw material acquisition to production and distribution.

The production of capital equipment, construction activities and infrastructure, maintenance and operation of capital equipment, personnel-related activities, and energy and water use related to company management and sales activities are excluded.

ESTIMATES AND ASSUMPTIONS

This LCA study has been conducted in accordance with the applicable methodological principles, including performance metrics, system boundaries, data quality requirements, allocation procedures, and rules for data inclusion and exclusion. The key assumptions and estimates applied in the modelling are outlined below:

Module A1:

For Acoustic Panels made from Reclaimed Used PET Panels, the sole material input — reclaimed PET felt panels — was modelled under the cut-off approach in accordance with EN 15804+A2 §6.4.3: no upstream burden is assigned to the original production of the reclaimed material.

For Acoustic Panels made from Recycled PET Fiber Boards, the same cut-off treatment applies to the reclaimed PET felt panels forming the panel core, and additionally to the recycled PET fiber used in the board producer's board. Recycled PET fibre was modelled using the cut-off approach. Burdens from the previous product system were excluded, while the processing required to supply usable recycled fibre and manufacture the PET board was included in Module A1. Based on 2024 production data, the material input for this product stream consists of approximately 56% PET felt board (by mass of inputs) supplied by the board producer, and 44% reclaimed PET felt from dismantled panels. The bicomponent PET/PBT binder fiber blended into that board is a virgin material and was modelled with its full upstream production burden using the correspondingecoinvent process. A 100% mass balance approach was applied to all raw material inputs, based on data provided by the board producer and ARC-T. Production scraps generated during board manufacturing at the board producer are sent to an industrial incineration facility for energy recovery; the associated burdens are included in Module A1 and the recovered energy is credited in Module D. Production offcuts generated at ARC-T are segregated as clean PET; approximately 90% by mass is sent for energy recovery (MER) at an industrial incineration facility located approximately 15 km away; the remaining 10% is re-used internally (CRU). The associated burdens are included in Module A3 and the recovered energy is credited in Module D. The board producer's entire cradle-to-gate footprint, including the inbound transport of raw fibre to its facility, is aggregated into a single upstream input and accounted for entirely within Module A1.

Module A2:

Average transport distances were calculated based on the locations of suppliers, the external board producer, the refreshing service provider, collection points and ARC-T, and allocated proportionally to the declared unit. Module A2 includes:

- transport of the finished PET felt board from the external board producer to ARC-T;
- transport of packaging materials to ARC-T;
- collection transport of reclaimed PET felt panels from dismantling sites and, where applicable, transport between the collection point, the refreshing service provider and ARC-T.

Module A3:

Energy inputs, including grid electricity and on-site photovoltaic generation, were included based on site-specific 2024 consumption data from ARC-T and the refreshing service provider.

Waste management at ARC-T was included as follows:

- production offcuts generated at ARC-T consist of a thermally bonded PET/BiCo felt blend and are segregated as clean material;
- approximately 90% by mass is sent for energy recovery (MER) in accordance with the net-scrap approach of EN 15804+A2 Annex D.2.2;
- the remaining 10% is re-used internally as Components for Re-use (CRU).

The environmental burdens associated with energy recovery are accounted for in Module A3, while the corresponding exported energy benefits are reported in Module D.

Module D:

Environmental credits are included for energy recovered from the incineration of production offcuts at the board producer (accounted for in Module A1) and from production offcuts generated at ARC-T (accounted for in Module A3). Exported electricity and heat are assumed to substitute conventional grid electricity and heat generation. No credit is assigned to end-of-life panels, which are landfilled without energy recovery, and no credit is assigned for the recycled or reclaimed content of the declared products, consistent with the cut-off approach applied throughout the background model.

ALLOCATION

The allocation is carried out in accordance with the provisions of EN 15804+A2. The information provided for the reference year 2024 covers both declared product streams produced by ARC-T. Since production resources and processing steps are shared across the two streams, inputs and outputs have been allocated on a mass basis and distributed proportionally to the declared unit of 1 kilogram of acoustic panel for each stream.

DATA QUALITY

For foreground data, the LCA study relies on primary data gathered from ARC-T and the panel-refreshing service provider for the year 2024. Energy for the external board producer was modelled using generic background datasets from the ecoinvent 3.9.1 database. All relevant background data sets have been sourced from the OpenLCA software's database: ecoinvent 3.9.1, using the Cutoff, U system model throughout.

GEOGRAPHIC REPRESENTATIVENESS

The specified land or region where the product system is manufactured and managed is Poland, Europe.

ENVIRONMENTAL IMPACT DATA:

1) Acoustic Panels made from Reclaimed Used PET Panels

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
GWP-Total	kg CO ₂ eq.	3,96E-02	3,23E-02	1,51E+00	1,58E+00	2,94E-02	MND/MNR	3,60E-04	9,25E-03	6,04E-02	9,04E-02	-8,70E-02
GWP-fossil	kg CO ₂ eq.	4,25E-02	3,22E-02	1,50E+00	1,57E+00	2,94E-02	MND/MNR	3,50E-04	9,24E-03	5,99E-02	9,03E-02	-8,67E-02
GWP-biogenic	kg CO ₂ eq.	-3,06E-03	6,67E-05	1,16E-02	8,59E-03	2,69E-05	MND/MNR	3,11E-06	8,46E-06	5,30E-04	9,65E-05	-3,10E-04
GWP-luluc	kg CO ₂ eq.	1,30E-04	2,03E-05	8,10E-04	9,60E-04	1,45E-05	MND/MNR	1,66E-07	4,56E-06	2,81E-05	9,92E-06	-2,33E-05
ODP	kg CFC-11 eq.	1,96E-09	6,82E-10	1,79E-08	2,05E-08	6,40E-10	MND/MNR	2,55E-12	2,01E-10	4,32E-10	2,81E-10	-2,73E-09
AP	mol H ⁺ eq.	1,90E-04	1,50E-04	1,53E-02	1,57E-02	6,42E-05	MND/MNR	4,01E-06	2,02E-05	6,80E-04	8,87E-05	-3,80E-04
EP-freshwater	kg P eq.	1,30E-05	4,33E-06	2,48E-03	2,50E-03	2,09E-06	MND/MNR	6,70E-07	6,57E-07	1,10E-04	1,79E-06	-5,72E-05
EP-marine	kg N eq.	4,74E-05	5,07E-05	2,22E-03	2,32E-03	1,62E-05	MND/MNR	5,78E-07	5,09E-06	9,77E-05	2,26E-03	-6,33E-05
EP-terrestrial	mol N eq.	4,10E-04	5,50E-04	1,96E-02	2,05E-02	1,60E-04	MND/MNR	5,03E-06	5,18E-05	8,50E-04	3,50E-04	-5,80E-04
POCP	kg NMVOC eq.	1,70E-04	2,10E-04	5,76E-03	6,14E-03	9,97E-05	MND/MNR	1,45E-06	3,13E-05	2,50E-04	1,40E-04	-2,20E-04
ADPE (disc.2)	kg Sb eq.	9,49E-08	1,05E-07	5,90E-06	6,10E-06	6,83E-08	MND/MNR	1,71E-10	2,15E-08	2,90E-08	1,50E-08	-4,01E-08
ADPF (disc.2)	MJ, (NCV)	1,10E+00	4,60E-01	2,44E+01	2,59E+01	4,20E-01	MND/MNR	6,39E-03	1,32E-01	1,08E+00	2,64E-01	-1,39E+00
WDP (disc.2)	m ³ World eq.	3,35E-02	3,08E-03	6,11E-01	6,47E-01	2,09E-03	MND/MNR	1,20E-04	6,60E-04	2,03E-02	1,58E-03	-1,20E-02
Acronyms	GWP-total – Climate change, total global warming potential; GWP-fossil – Climate change, fossil fuels; GWP-biogenic – Climate change, biogenic carbon; GWP-luluc – Climate change, land use and land use change; ODP – Ozone layer depletion; AP – Acidification of terrestrial and freshwater environments; EP-freshwater – Eutrophication, freshwater; EP-marine – Eutrophication, marine; EP-terrestrial – Eutrophication, terrestrial; POCP – Photochemical ozone formation (smog formation); ADPE – Abiotic depletion, minerals and metals; ADPF – Abiotic depletion, fossil fuels; WDP – Water scarcity (water use deprivation potential); NCV - net calorific value.											
Disclaimer 2	The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.											

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
PM	Disease Incidence	1,88E-09	3,02E-09	3,17E-08	3,66E-08	1,75E-09	MND/MNR	6,52E-12	5,50E-10	1,10E-09	1,82E-09	-8,13E-10
IRP (disc.1)	kBq U235 eq.	3,83E-03	1,32E-03	7,57E-02	8,08E-02	5,60E-04	MND/MNR	1,83E-05	1,80E-04	3,10E-03	4,20E-04	-2,63E-03
ETP-fw (disc.2)	CTUe	1,84E-01	2,19E-01	7,20E+00	7,60E+00	2,06E-01	MND/MNR	1,65E-03	6,47E-02	2,80E-01	3,27E-01	-1,79E-01
HTP-c (disc.2)	CTUh	1,65E-11	4,83E-11	7,63E-10	8,28E-10	1,32E-11	MND/MNR	1,70E-13	4,14E-12	2,88E-11	6,99E-12	-2,45E-11
HTP-nc (disc.2)	CTUh	3,06E-10	3,03E-10	2,89E-08	2,95E-08	2,58E-10	MND/MNR	6,24E-12	8,10E-11	1,05E-09	2,03E-10	-6,21E-10
SQP (disc.2)	Dimensionless	4,58E-01	1,86E-01	5,38E+00	6,02E+00	2,52E-01	MND/MNR	1,36E-03	7,93E-02	2,30E-01	5,81E-01	-1,33E-01
Acronyms	PM – Particulate matter emissions (potential incidence of disease); IRP – Ionising radiation, human health exposure potential; ETP-fw – Ecotoxicity, freshwater; HTP-c – Human toxicity, cancer effects; HTP-nc – Human toxicity, non-cancer effects; SQP – Land use related impacts, soil quality.											
Disclaimer 1	This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.											
Disclaimer 2	The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.											

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
PERE	MJ, (NCV)	1,12E-01	1,31E-02	7,46E+00	7,59E+00	6,56E-03	MND/MNR	5,90E-04	2,06E-03	9,98E-02	5,47E-03	-5,86E-02
PERM	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ, (NCV)	1,12E-01	1,31E-02	7,46E+00	7,59E+00	6,56E-03	MND/MNR	5,90E-04	2,06E-03	9,98E-02	5,47E-03	-5,86E-02
PENRE	MJ, (NCV)	1,10E+00	4,60E-01	2,44E+01	2,59E+01	4,20E-01	MND/MNR	6,39E-03	1,32E-01	1,08E+00	2,64E-01	-1,39E+00
PENRM	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ, (NCV)	1,10E+00	4,60E-01	2,44E+01	2,59E+01	4,20E-01	MND/MNR	6,39E-03	1,32E-01	1,08E+00	2,64E-01	-1,39E+00
SM	kg	1,06E+00	0,00E+00	0,00E+00	1,06E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	1,42E-03	1,00E-04	6,59E-02	6,74E-02	6,90E-05	MND/MNR	1,71E-05	2,17E-05	2,89E-03	2,80E-04	-1,47E-03
Acronyms	PERE – Use of renewable primary energy as energy carriers; PERM – Use of renewable primary energy resources as raw materials; PERT – Total use of renewable primary energy resources (PERE + PERM); PENRE – Use of non-renewable primary energy as energy carriers; PENRM – Use of non-renewable primary energy resources as raw materials; PENRT – Total use of non-renewable primary energy resources (PENRE + PENRM); SM – Use of secondary material; RSF – Use of renewable secondary fuels; NRSF – Use of non-renewable secondary fuels; FW – Net use of fresh water; NCV - net calorific value.											

OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
CRU	kg	0,00E+00	0,00E+00	6,00E-03	6,00E-03	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	5,40E-02	5,40E-02	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	1,74E-01	1,74E-01	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	7,01E-01	7,01E-01	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	CRU – Components for re-use; MFR – Materials for recycling; MER – Materials for energy recovery; EEE – Exported electrical energy; EET – Exported thermal energy.											

WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
HWD	kg	1,05E-06	1,01E-05	1,00E-04	1,11E-04	2,66E-06	MND/MNR	3,82E-09	8,36E-07	6,45E-07	1,28E-06	-3,93E-06
NHWD	kg	7,77E-05	1,61E-05	1,11E-03	1,20E-03	1,18E-05	MND/MNR	9,52E-08	3,72E-06	1,61E-05	1,00E+00	-2,13E-05
RWD	kg	9,72E-07	3,32E-07	1,86E-05	1,99E-05	1,37E-07	MND/MNR	4,50E-09	4,31E-08	7,62E-07	1,00E-07	-6,58E-07
Acronyms	HWD – Hazardous waste disposed; NHWD – Non-hazardous waste disposed; RWD – Radioactive waste disposed.											

2) Acoustic Panels made from Recycled PET Fiber Boards

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
GWP-Total	kg CO2 eq.	2,86E+00	3,52E-02	1,02E+00	3,92E+00	4,12E-02	MND/MNR	3,60E-04	9,25E-03	6,04E-02	9,04E-02	-2,79E-01
GWP-fossil	kg CO2 eq.	2,73E+00	3,52E-02	1,01E+00	3,78E+00	4,11E-02	MND/MNR	3,50E-04	9,24E-03	5,99E-02	9,03E-02	-2,78E-01
GWP-biogenic	kg CO2 eq.	1,33E-01	4,55E-05	7,36E-03	1,40E-01	3,77E-05	MND/MNR	3,11E-06	8,46E-06	5,30E-04	9,65E-05	-9,80E-04
GWP-luluc	kg CO2 eq.	2,74E-03	1,86E-05	5,90E-04	3,35E-03	2,03E-05	MND/MNR	1,66E-07	4,56E-06	2,81E-05	9,92E-06	-7,48E-05
ODP	kg CFC-11 eq.	4,37E-06	7,58E-10	1,44E-08	4,39E-06	8,95E-10	MND/MNR	2,55E-12	2,01E-10	4,32E-10	2,81E-10	-8,77E-09
AP	mol H+ eq.	1,23E-02	1,10E-04	9,87E-03	2,22E-02	8,99E-05	MND/MNR	4,01E-06	2,02E-05	6,80E-04	8,87E-05	-1,22E-03
EP-freshwater	kg P eq.	1,15E-03	3,35E-06	1,57E-03	2,72E-03	2,92E-06	MND/MNR	6,70E-07	6,57E-07	1,10E-04	1,79E-06	-1,80E-04
EP-marine	kg N eq.	2,68E-03	3,30E-05	1,44E-03	4,15E-03	2,27E-05	MND/MNR	5,78E-07	5,09E-06	9,77E-05	2,26E-03	-2,00E-04
EP-terrestrial	mol N eq.	2,41E-02	3,50E-04	1,27E-02	3,72E-02	2,30E-04	MND/MNR	5,03E-06	5,18E-05	8,50E-04	3,50E-04	-1,87E-03
POCP	kg NMVOC eq.	1,32E-02	1,60E-04	3,79E-03	1,71E-02	1,40E-04	MND/MNR	1,45E-06	3,13E-05	2,50E-04	1,40E-04	-7,20E-04
ADPE (disc.2)	kg Sb eq.	6,88E-06	9,56E-08	5,67E-06	1,26E-05	9,56E-08	MND/MNR	1,71E-10	2,15E-08	2,90E-08	1,50E-08	-1,29E-07
ADPF (disc.2)	MJ, (NCV)	4,52E+01	5,01E-01	1,57E+01	6,14E+01	5,88E-01	MND/MNR	6,39E-03	1,32E-01	1,08E+00	2,64E-01	-4,45E+00
WDP (disc.2)	m ³ World eq.	1,07E+00	2,79E-03	4,47E-01	1,52E+00	2,92E-03	MND/MNR	1,20E-04	6,60E-04	2,03E-02	1,58E-03	-3,86E-02
Acronyms	GWP-total – Climate change, total global warming potential; GWP-fossil – Climate change, fossil fuels; GWP-biogenic – Climate change, biogenic carbon; GWP-luluc – Climate change, land use and land use change; ODP – Ozone layer depletion; AP – Acidification of terrestrial and freshwater environments; EP-freshwater – Eutrophication, freshwater; EP-marine – Eutrophication, marine; EP-terrestrial – Eutrophication, terrestrial; POCP – Photochemical ozone formation (smog formation); ADPE – Abiotic depletion, minerals and metals; ADPF – Abiotic depletion, fossil fuels; WDP – Water scarcity (water use deprivation potential); NCV - net calorific value.											
Disclaimer 2	The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.											

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
PM	Disease Incidence	1,03E-07	2,38E-09	2,29E-08	1,28E-07	2,45E-09	MND/MNR	6,52E-12	5,50E-10	1,10E-09	1,82E-09	-2,61E-09
IRP (disc.1)	kBq U235 eq.	2,46E-01	1,06E-03	5,07E-02	2,98E-01	7,90E-04	MND/MNR	1,83E-05	1,80E-04	3,10E-03	4,20E-04	-8,45E-03
ETP-fw (disc.2)	CTUe	1,27E+01	2,46E-01	4,95E+00	1,78E+01	2,88E-01	MND/MNR	1,65E-03	6,47E-02	2,80E-01	3,27E-01	-5,75E-01
HTP-c (disc.2)	CTUh	1,11E-09	2,97E-11	5,32E-10	1,67E-09	1,84E-11	MND/MNR	1,70E-13	4,14E-12	2,88E-11	6,99E-12	-7,84E-11
HTP-nc (disc.2)	CTUh	2,50E-08	3,05E-10	2,04E-08	4,57E-08	3,61E-10	MND/MNR	6,24E-12	8,10E-11	1,05E-09	2,03E-10	-1,99E-09
SQP (disc.2)	Dimensionless	8,42E+00	2,35E-01	3,53E+00	1,22E+01	3,53E-01	MND/MNR	1,36E-03	7,93E-02	2,30E-01	5,81E-01	-4,25E-01
Acronyms	PM – Particulate matter emissions (potential incidence of disease); IRP – Ionising radiation, human health exposure potential; ETP-fw – Ecotoxicity, freshwater; HTP-c – Human toxicity, cancer effects; HTP-nc – Human toxicity, non-cancer effects; SQP – Land use related impacts, soil quality.											
Disclaimer 1	This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.											
Disclaimer 2	The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.											

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
PERE	MJ, (NCV)	3,43E+00	1,09E-02	6,66E+00	1,01E+01	9,18E-03	MND/MNR	5,90E-04	2,06E-03	9,98E-02	5,47E-03	-1,88E-01
PERM	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ, (NCV)	3,43E+00	1,09E-02	6,66E+00	1,01E+01	9,18E-03	MND/MNR	5,90E-04	2,06E-03	9,98E-02	5,47E-03	-1,88E-01
PENRE	MJ, (NCV)	4,53E+01	5,01E-01	1,57E+01	6,14E+01	5,88E-01	MND/MNR	6,39E-03	1,32E-01	1,08E+00	2,64E-01	-4,45E+00
PENRM	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ, (NCV)	4,53E+01	5,01E-01	1,57E+01	6,14E+01	5,88E-01	MND/MNR	6,39E-03	1,32E-01	1,08E+00	2,64E-01	-4,45E+00
SM	kg	8,93E-01	0,00E+00	0,00E+00	8,93E-01	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ, (NCV)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	5,80E-02	9,35E-05	4,27E-02	1,01E-01	9,65E-05	MND/MNR	1,71E-05	2,17E-05	2,89E-03	2,80E-04	-4,71E-03
Acronyms	PERE – Use of renewable primary energy as energy carriers; PERM – Use of renewable primary energy resources as raw materials; PERT – Total use of renewable primary energy resources (PERE + PERM); PENRE – Use of non-renewable primary energy as energy carriers; PENRM – Use of non-renewable primary energy resources as raw materials; PENRT – Total use of non-renewable primary energy resources (PENRE + PENRM); SM – Use of secondary material; RSF – Use of renewable secondary fuels; NRSF – Use of non-renewable secondary fuels; FW – Net use of fresh water; NCV - net calorific value.											

OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
CRU	kg	0,00E+00	0,00E+00	6,00E-03	6,00E-03	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	kg	1,19E-01	0,00E+00	5,40E-02	1,73E-01	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	3,84E-01	0,00E+00	1,74E-01	5,58E-01	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	1,55E+00	0,00E+00	7,01E-01	2,25E+00	0,00E+00	MND/MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	CRU – Components for re-use; MFR – Materials for recycling; MER – Materials for energy recovery; EEE – Exported electrical energy; EET – Exported thermal energy.											

WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5 B1-B7	C1	C2	C3	C4	D
HWD	kg	3,71E-03	6,33E-06	9,63E-05	3,81E-03	3,72E-06	MND/MNR	3,82E-09	8,36E-07	6,45E-07	1,28E-06	-1,26E-05
NHWD	kg	3,37E-02	1,57E-05	9,80E-04	3,47E-02	1,66E-05	MND/MNR	9,52E-08	3,72E-06	1,61E-05	1,00E+00	-6,83E-05
RWD	kg	6,18E-05	2,63E-07	1,25E-05	7,45E-05	1,92E-07	MND/MNR	4,50E-09	4,31E-08	7,62E-07	1,00E-07	-2,11E-06
Acronyms	HWD – Hazardous waste disposed; NHWD – Non-hazardous waste disposed; RWD – Radioactive waste disposed.											

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity used in module A3 is based on a custom dataset for the Polish electricity mix (ecoinvent 3.9.1). For climate change modelling, the GWP-fossil result for Polish grid electricity, originally derived from ecoinvent 3.9.1 characterisation, was replaced with the poLCA-EN-PL-2024 reference emission factor (0.599 kg CO ₂ e/kWh, well-to-meter boundary). GWP-biogenic and GWP-luluc, and all other impact categories, retain the unmodified ecoinvent 3.9.1 characterisation results. On-site photovoltaic generation at ARC-T was modelled using the ecoinvent dataset for electricity production, photovoltaic, and accounted for separately from grid electricity. Energy consumed by the external refreshing service provider was included in Module A3 based on site-specific 2024 data. Source: Polish LCA Network, poLCA-EN-PL-2024 (DOI: 10.5281/zenodo.21520374)
Electricity CO ₂ e / kWh	0,599 kg CO ₂ e / kWh

Deconstruction energy scenario documentation

Scenario parameter	Value
Deconstruction energy data source	Site-specific data provided by ARC-T (2024): approximately 5 kWh of electricity consumed per 8 457 kg of panels dismantled across 30 collection events, yielding 0,00059 kWh/kg. Measured using electric power screwdrivers.
Deconstruction energy (C1)	0,00059 kWh/kg of product

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EPD VERIFICATION:

This Environmental Product Declaration (EPD) has been independently verified in accordance with the requirements of ISO 14025 and the EPD Polska programme rules.

The EPD was published on 10 September 2026 and is valid until 10 September 2031, subject to continued registration. Any extension beyond this date requires review and re-verification in accordance with the programme rules. The EPD shall be reviewed and updated if significant changes occur in the underlying data, manufacturing processes or product characteristics.

EPD CONTRIBUTORS

Manufacturer representative

dr inż. Konrad Kacprzak, Laboratory
Manager

EPD verifier

Izabela Sztamberek-Sochan, Ph.D.

Note: The EPD owner has the sole ownership, liability and responsibility for this EPD. Construction product declarations may not be comparable if they do not comply with EN 15804. For detailed information on comparability, please refer to EN 15804 and ISO 14025.

EPD Polska Certificate



CERTIFICATE

TYPE III EPD DECLARATION

(ENVIRONMENTAL PRODUCT DECLARATION)

Reg. No. EPD-P 02.09.2026



This document confirms that the Environmental Product Declaration developed by **ARC-T Sp. z o.o.** for:

Affice Acoustic Panels made from Reclaimed Used PET Panels

and

Affice Acoustic Panels made from Recycled PET Fiber Boards

assessed in accordance with standards ISO 11654:1997, EN ISO 354:2003 and EN 13501-1:2018

meets the requirements of standards **EN 15804:2012+A2:2019** and **ISO 14025**, and that the data contained therein has been prepared correctly.

The Declaration was published on September 10, 2026 and is valid until September 10, 2031 or until it is deregistered or its publication on the website www.epd.org.pl is discontinued.

The authenticity of this certificate can be confirmed in the public register at www.epd.org.pl



Izabela Sztamberek-Sochan, Ph.D.
EPD Polska Verifier



Grzegorz Suwara
CEO Multicert Sp. z o.o.

Warsaw, September 10, 2026