

Environmental product declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Excellens Ducts

from Tecnosystemi Group S.p.A Benefit Company

This EPD of multiple products is based on the representative product
“Excellens T Standard duct T72-EXC”



Programme	International EPD® System, www.environdec.com
Programme operator	EPD International AB
EPD registration number	EPD-IES-0007390
Publication date	2025-04-30
Valid until	2030-04-29

*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	International EPD® System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm, Sweden
Website	www.environdec.com
E-mail	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification

Product Category Rules (PCR)

- CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
- Product Category Rules (PCR): PCR 2019:14 Construction products and construction services (v 1.3.4)
- PCR review was conducted by:
The Technical Committee of the International EPD® System. Chair: Claudia A. Peña.

Life Cycle Assessment (LCA)

LCA accountability:
 Soin Company srls
 Via Orgnani 1
 33034 Fagagna (UD)
 www.soincompany.com

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

- EPD verification by accredited certification body
- Third-party verification: IMQ S.p.A. con Socio Unico, Via Quintiliano 43 I Italia - 20138 Milano
- The certification body is accredited by: ACCREDIA

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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

It is not recommended to use the results of modules A1-A3 without considering the results of module C.

COMPANY INFORMATION

Owner of the EPD

TECNOSYSTEMI SPA SOCIETÀ BENEFIT

Contact

Michele Arbo
Quality Management
michele.arbo@tecnosystemi.com

Description of the organisation

Tecnosystemi is a **Benefit Company**; the headquarter is in via dell'Industria 2/4 - 31029 - Vittorio Veneto (TV). It was officially established in 1992 and began its history by selling a small range of air conditioning accessories. In 1996 it also became a production company, thus beginning a virtuous path that is still evolving today. The turning point came in 2013, with the definitive move of the headquarters to Vittorio Veneto and the transfer of ownership to the Anna Munari and Giorgio Rigoni family. The passion for their work and the vision of a company of the future led the owners to invest in technological means, transforming a small Veneto company into a large enterprise. With the construction of the third warehouse in 2019, Tecnosystemi expanded to cover an area of 33,000 m² and a covered area of 22,000 m². The Company designs and manufactures a diversified range of accessories for air conditioning, ventilation and air exchange, always aiming at a strategy of diversification to meet the needs of different customers in Italy and abroad. Thanks to research and the recognised value of internal production know-how, Tecnosystemi continuously invests in new production technologies.



Product-related or management system-related certifications



Name and location of production site

Via dell'Industria 2/4, Vittorio Veneto (Treviso)

PRODUCT INFORMATION

Product name

EXCELLENS DUCTS

Product identification and description

The products included in the EPD are part of the SMART CLIMA line, which includes a wide range of accessories for climate control (air conditioning, ventilation, and sanitation) and, specifically, the EXCELLENS line, manufactured at the Vittorio Veneto plant (Italy).

The **Excellens** line of ducts includes 3 different types of items:

- **Standard**, made entirely of PVC (Polyvinyl chloride);
- **Standard with bubble**, made entirely of PVC and includes a four-directional sliding bubble;
- **Standard with protective film**, made of 100% PVC, featuring a polyethylene protective film to be removed once installation is completed. The removable film protects the cable duct during installation and, once the work is finished, is removed to ensure the cleanliness of the duct itself.

The product chosen as a reference is Excellens T Standard Duct T72-EXC, as it is the best-selling during the reference year of the study. All environmental performance indicators have been calculated, taking it as a reference.

Product	Code	A [mm]	B [mm]	Length [m]	Weight [g]
EXCELLENS T Standard Duct T72-EXC	N11120072	74	64	2	990
Features	• Impact-resistant rigid PVC, UVA-resistant, white, recyclable • Rounded base and cover • Central spring latch • Pre-drilled for wall mounting • Paintable • Operating temperature -20°C to +60°C				

UN CPC Code

3699 Articles of plastics n.e.c.

Geographical scope

Italy

LCA INFORMATION

Functional unit / declared unit

1 kg of finished product, plus its packaging

Time representativeness

The primary data cover a period of 12 months, reference year 2023

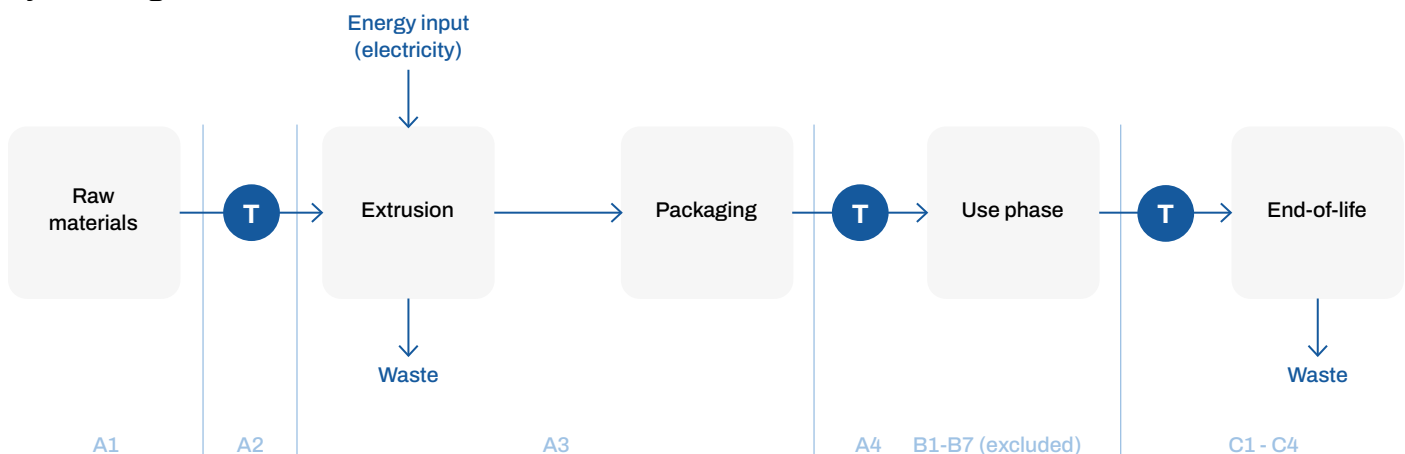
Database(s) and LCA software used

Ecoinvent 3.10.1 database, SimaPro Software version 9.6.0.1.

Description of system boundaries

The system boundaries are set according to the Cradle to gate with options, modules C1-C4, module D and with optional modules (A1-A3 +C + D) and additional modules. As additional module it was chosen A5, considered for balancing out the biogenic content of the product packaging. Moreover, construction, maintenance and decommissioning of infrastructures and machinery is not considered since it's believed their contribution is negligible and therefore not included in the study.

System diagram



Data quality

The primary data on PVC raw materials, energy consumption, waste production, and product packaging used for the distribution from the Vittorio Veneto factory pertain to the year 2023 and are site-specific. The company also collected information on raw materials (supplier locations and packaging used for transport) and product distribution (packaging used for transport).

Proxy data

In the absence of selected primary or generic data, proxy data were used, whose contribution does not exceed 10% of the potential impacts calculated for modules A1-A3.

Allocation procedures

Allocation procedures were used for energy consumption (electricity and natural gas) and waste produced, based on the total 2023 production of extrusion and injection manufactures. Additional mass-based allocation procedures were applied for the packaging used to transport PVC to the facility (big bags and pallets) and for distribution packaging.

Cut off

Cut-offs were applied to include at least 95% of the total input flows (mass and energy) per module. For the "Excellens duct with level" and "Excellens standard duct with protective film" series, since the mass of the built-in level and protective film contributes respectively less than 0.6% and 2.1% of the total mass, a cut-off was applied. Additionally, for secondary packaging, the production and transport of the plastic film used to wrap cardboard boxes on the pallet were not considered.

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

	Product stage			Construction process stage	
	Raw material supply	Transport	Manufacturing	Transport	Construction / Installation
Module	A1	A2	A3	A4	A5
Modules declared	●	●	●	ND	●
Geography	EU	EU	IT	-	GLO
Specific data used	> 90%			-	-
Variation – products	< 10%			-	-
Variation – sites	Not applicable			-	-

Use stage							
	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use
Module	B1	B2	B3	B4	B5	B6	B7
Modules declared	ND	ND	ND	ND	ND	ND	ND
Geography	-	-	-	-	-	-	-
Specific data used	-	-	-	-	-	-	-
Variation – products	-	-	-	-	-	-	-
Variation – sites	-	-	-	-	-	-	-

	End of life stage				Resource recovery stage
	De-construction / demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	C1	C2	C3	C4	D
Modules declared	●	●	●	●	●
Geography	-	EU	EU	GLO	GLO
Specific data used	-	-	-	-	-
Variation – products	-	-	-	-	-
Variation – sites	-	-	-	-	-

CONTENT INFORMATION

Product components	Weight. kg	Post-consumer material. weight-%	Biogenic material. weight-% and kg C/kg
Polyvinyl chloride (PVC)	1.00	0.0 %	0.000
TOTAL	1.00	0.0 %	0.000
Product components	Weight. kg	Post-consumer material. weight-%	Biogenic material. weight-% and kg C/kg
Corrugated cardboard	0.1200	12.00%	0.051
Pallet	0.0013	0.13%	0.0005
TOTAL	0.1213	12.13%	0.052

The product and relative packaging materials do not include any substance present in the “Candidate list of substances of very high concern for authorization” in percentage greater than 0.1%.

INFORMATION RELATED TO EPD OF MULTIPLE PRODUCTS

The table below summarizes the products included in this EPD.

Product	Code	Colour
TB 60-EXC Standard duct with bubble	B-N11120060	White
TB 72-EXC Standard duct with bubble	B-N11120072	White
TB 100-EXC Standard duct with bubble	B-N11120010	White
T 60-EXC Standard duct	N11120060	White
T 72-EXC Standard duct	N11120072	White
T 100-EXC Standard duct	N11120010	White
T 60-EXC Standard duct with protective film	SCD100099	White
T 72-EXC Standard duct with protective film	SCD100100	White
T 100-EXC Standard duct with protective film	SCD100101	White

RESULTS OF THE ENVIRONMENTAL PERFORMANCE INDICATORS

Mandatory impact category indicators according to EN 15804

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
GWP total	kg CO ₂ eq.	3.00E+00	4.11E-02	0.00E+00	1.92E-02	4.62E-01	3.26E-01	-1.56E+00
GWP fossil	kg CO ₂ eq.	3.04E+00	1.86E-03	0.00E+00	1.92E-02	4.21E-01	3.25E-01	-1.53E+00
GWP biogenic	kg CO ₂ eq.	-4.50E-02	3.92E-02	0.00E+00	1.33E-05	4.03E-02	4.68E-04	-2.13E-02
GWP luluc	kg CO ₂ eq.	3.04E-03	5.28E-07	0.00E+00	6.33E-06	4.89E-04	3.27E-05	-1.18E-03
ODP	kg CFC 11 eq.	8.63E-07	3.74E-11	0.00E+00	3.85E-10	5.74E-09	1.51E-09	-5.43E-07
AP	mol H+ eq.	1.10E-02	1.02E-05	0.00E+00	7.66E-05	1.43E-03	2.43E-04	-5.35E-03
EP freshwater	kg P eq.	1.20E-04	1.46E-08	0.00E+00	1.49E-07	1.61E-05	1.14E-06	-4.88E-04
EP marine	kg N eq.	2.12E-03	1.97E-05	0.00E+00	2.86E-05	3.21E-04	6.45E-05	-1.07E-03
EP terrestrial	mol N eq.	2.19E-02	3.73E-05	0.00E+00	3.14E-04	3.37E-03	6.83E-04	-1.02E-02
POCP	kg NMVOC eq.	1.16E-02	2.03E-05	0.00E+00	1.16E-04	1.28E-03	2.23E-04	-6.08E-03
ADP minerals and metals*	kg Sb eq.	3.36E-05	5.47E-09	0.00E+00	6.19E-08	2.90E-06	2.36E-07	-1.97E-05
ADP fossil*	MJ	6.59E+01	2.59E-02	0.00E+00	2.72E-01	5.50E+00	5.48E-01	-3.67E+01
WDP*	m3	3.20E+00	3.89E-05	0.00E+00	1.11E-03	7.78E-02	2.31E-01	-1.93E+00
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.

Additional mandatory and voluntary impact category indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ eq.	3.05E+00	2.41E-02	0.00E+00	1.92E-02	4.39E-01	3.26E-01	-1.54E+00

Resource use indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
PERE	MJ	5.23E+00	1.04E-03	0.00E+00	4.45E-03	8.25E-01	4.47E-02	-2.19E+00
PERM	MJ	2.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	7.30E+00	1.04E-03	0.00E+00	4.45E-03	8.25E-01	4.47E-02	-2.19E+00
PENRE	MJ	7.09E+01	2.76E-02	0.00E+00	2.89E-01	0.00E+00	5.85E-01	-3.95E+01
PENRM	MJ	3.81E-03	0.00E+00	0.00E+00	0.00E+00	5.81E+00	0.00E+00	0.00E+00
PENRT	MJ	7.09E+01	2.76E-02	0.00E+00	2.89E-01	0.00E+00	5.85E-01	-3.95E+01
SM	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	2.38E-02	-5.78E-05	0.00E+00	3.72E-05	3.50E-03	8.55E-03	-1.17E-02
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							

Waste indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Hazardous waste disposed	Kg	1.40E-03	1.94E-07	0.00E+00	1.83E-06	3.71E-05	1.06E-05	-8.52E-04
Non-hazardous waste disposed	Kg	2.45E-01	1.65E-02	0.00E+00	1.29E-02	1.47E-01	1.87E-01	-1.03E-01
Radioactive waste disposed	Kg	8.59E-05	1.62E-08	0.00E+00	8.66E-08	2.03E-05	5.22E-07	-5.10E-05

Output flow indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Components for re-use	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy. electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy. thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ADDITIONAL ENVIRONMENTAL AND SOCIAL INFORMATION

In 2017, a 500 kWp photovoltaic system was installed on the rooftop of the factory where Excellens ducts are produced. In 2023, the system covered the 49% about of the electricity needs of the factory.



Always attentive to sustainability issues in their most complete vision (social, environmental and economic), in 2021 Tecnosystemi marks a new beginning by becoming a **Benefit Company**, thus rewriting its corporate purpose and officially declaring its serious intention to generate a positive impact on the environment and the community, continuing a path that had already begun years earlier.

In 2023, Tecnosystemi carried out a major redevelopment of the areas outside the factories, designing a **real urban forest** signed by an internationally renowned landscape architect, João Ferreira Nunes, who interpreted the Company's vision and turned it into reality: circularity, sustainability, compensation, are the key elements of this project, designed for the entire community and all the people who work in the Company.



References

- Product Category Rule “Construction Products (2019:14 VERSION 1.3.4)”
- EN 15804:2012+A2:2019. Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.
- General Programme Instructions for the International EPD System, v. 4.0
- UNI EN ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations
- UNI EN ISO 14040:2021, Environmental management - Life cycle assessment - Principles and framework
- UNI EN ISO 14044:2021, Environmental management. Life cycle assessment - Requirements and guidelines
- ISPRA (2024). Rapporto Rifiuti Speciali Edizione 2024 – RAPPORTI 402/2024 ISPRA.
From <https://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-speciali-edizione-2024>
- ISPRA (2023) Rapporto Rifiuti Urbani - Edizione 2023.
Tratto da <https://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-urbani-edizione-2023>
- Report_LCA_Linea_EXCELLENS_Canalina_rev01.pdf, Rev 01 of 2025/02/19

Environmental product declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Excellens Accessories

from Tecnosystemi Group S.p.A Benefit Company

This EPD of multiple products is based on the representative product
“Wall-mounted terminal TM72-EXC”



Programme	International EPD® System, www.environdec.com
Programme operator	EPD International AB
EPD registration number	EPD-IES-0007409
Publication date	2025-04-30
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E-mail	info@environdec.com

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It is not recommended to use the results of modules A1-A3 without considering the results of module C.

COMPANY INFORMATION

Owner of the EPD

TECNOSYSTEMI SPA SOCIETÀ BENEFIT

Contact

Michele Arbo
Quality Management
michele.arbo@tecnosystemi.com

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Product-related or management system-related certifications



Name and location of production site

Via dell'Industria 2/4, Vittorio Veneto (Treviso)

PRODUCT INFORMATION

Product name

EXCELLENS ACCESSORIES

Product identification and description

The products included in the EPD are part of the SMART CLIMA line, which includes a wide range of accessories for climate control (air conditioning, ventilation, and sanitation) and, specifically, the EXCELLENS line, manufactured at the Vittorio Veneto plant (Italy).

The **Excellens** line of accessories includes seven different types of items:

- Curves (flat, articulated flat, corner, articulated corner)
- “T” shunts
- Sleeves (coupling, flexible, universal rotation)
- Wall rosettes
- Closing caps
- Reductions per duct
- Terminals (wall-mounted, corner, pipe output)

The product chosen as a reference is the Wall-mounted terminal TM72-EXC, as it is the best-selling during the reference year of the study. All environmental performance indicators have been calculated, taking it as a reference.

Product	Code	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Mass [g]
EXCELLENS TM-72 Wall cover terminal	N11124172	78	68	185	108	78	156
Features	• Stiff, shockproof, anti-UVA and recyclable PVC, white • Interlocking bottom and lid • Duct profile locating ridge • Outer contouring to facilitate pipe bends • Outer flange hole cover • Galvanised screws • Paintable • Operating temperature -20°C / +60°C						

UN CPC Code

3699 Articles of plastics n.e.c.

Geographical scope

Italy

LCA INFORMATION

Functional unit / declared unit

1 kg of finished product, plus its packaging

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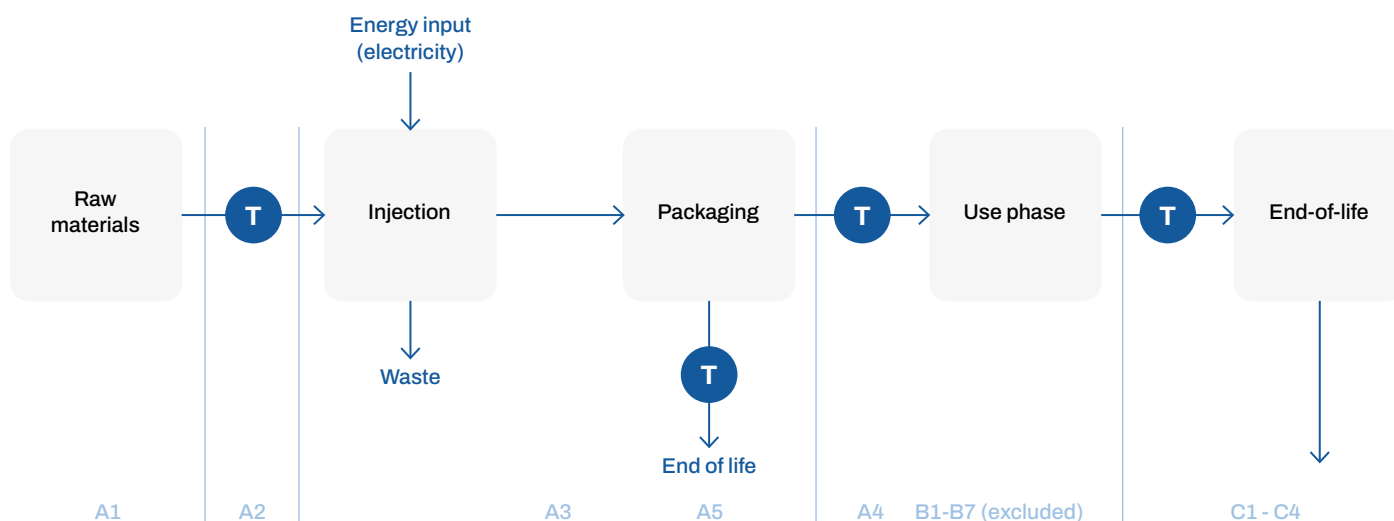
Database(s) and LCA software used

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System diagram



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Cut off

No cut-off was applied.

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

	Product stage			Construction process stage	
	Raw material supply	Transport	Manufacturing	Transport	Construction / Installation
Module	A1	A2	A3	A4	A5
Modules declared	●	●	●	ND	●
Geography	EU	-	IT	-	GLO
Specific data used	> 90%			-	-
Variation – products	-18.7% / +18.5%			-	-
Variation – sites	Not applicable			-	-

Use stage							
	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use
Module	B1	B2	B3	B4	B5	B6	B7
Modules declared	ND	ND	ND	ND	ND	ND	ND
Geography	-	-	-	-	-	-	-
Specific data used	-	-	-	-	-	-	-
Variation – products	-	-	-	-	-	-	-
Variation – sites	-	-	-	-	-	-	-

	End of life stage				Resource recovery stage
	De-construction / demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	C1	C2	C3	C4	D
Modules declared	●	●	●	●	●
Geography	-	EU	EU	GLO	GLO
Specific data used	-	-	-	-	-
Variation – products	-	-	-	-	-
Variation – sites	-	-	-	-	-

CONTENT INFORMATION

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Polyvinyl chloride (PVC)	0.984	0.0 %	0.000
Galvanised screws	0.016	0.0 %	0.000
TOTAL	1.00	0.0 %	0.000

Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
LDPE	0.0480	4.80 %	0.000
Corrugated cardboard	0.1281	12.81 %	0.055
Pallet	0.0055	0.55 %	0.0021
TOTAL	0.1816	18.16 %	0.057

The product and relative packaging materials do not include any substance present in the “Candidate list of substances of very high concern for authorization” in percentage greater than 0.1%.

INFORMATION RELATED TO EPD OF MULTIPLE PRODUCTS

The table below summarizes the products included in this EPD.

Terminals	Curves	Sleeves	T-shunts	Wall rosette	Closing caps	Reductions per duct
TM60-EXC Wall-mounted white	CP60-EXC Flat white	MG60-EXC Coupling white	DT60-EXC white	RM60-EXC wall rosette white	TC60-EXC white	RC72/60-EXC white
TM72-EXC Wall-mounted white	CP72-EXC Flat white	MG72-EXC Coupling white	DT72-EXC white	RM72-EXC wall rosette white	TC72-EXC white	RC100/72-EXC white
TM100-EXC Wall-mounted white	CP100-EXC Flat white	MG100-EXC Coupling white	DT100-EXC white	RM100-EXC wall rosette white	TC100-EXC white	
TA60-EXC Corner white	CPS60-EXC flat articulated white	MRU60-EXC Universal rotation white				
TA72-EXC Corner white	CPS72-EXC flat articulated white	MRU72-EXC Universal rotation white				
TA100-EXC Corner white	CA60-EXC Corner white	MRU100-EXC Universal rotation white				
TS60-EXC Pipe output white	CA72-EXC Corner white	MF60-EXC Flexible white				
TS72-EXC Pipe output white	CA100-EXC Corner white	MF72-EXC Flexible white				
TS72-EXC Pipe output white	CAS60-EXC corner articulated white	MF100-EXC Flexible white				
	CAS72-EXC corner articulated white					

RESULTS OF THE ENVIRONMENTAL PERFORMANCE INDICATORS

Mandatory impact category indicators according to EN 15804

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
GWP total	kg CO ₂ eq.	3.70E+00	1.05E-01	0.00E+00	1.90E-02	4.54E-01	3.21E-01	-1.56E+00
GWP fossil	kg CO ₂ eq.	3.88E+00	6.33E-02	0.00E+00	1.89E-02	4.14E-01	3.20E-01	-1.53E+00
GWP biogenic	kg CO ₂ eq.	-1.79E-01	4.18E-02	0.00E+00	1.31E-05	3.96E-02	4.60E-04	-2.13E-02
GWP luluc	kg CO ₂ eq.	3.64E-03	8.34E-07	0.00E+00	6.23E-06	4.81E-04	3.21E-05	-1.18E-03
ODP	kg CFC 11 eq.	9.04E-07	6.18E-11	0.00E+00	3.79E-10	5.65E-09	1.49E-09	-5.43E-07
AP	mol H ⁺ eq.	1.46E-02	2.02E-05	0.00E+00	7.54E-05	1.41E-03	2.39E-04	-5.35E-03
EP freshwater	kg P eq.	1.18E-03	2.37E-07	0.00E+00	1.27E-06	1.39E-04	1.45E-05	-4.88E-04
EP marine	kg N eq.	2.99E-03	2.95E-05	0.00E+00	2.84E-05	4.25E-04	1.25E-04	-1.07E-03
EP terrestrial	mol N eq.	2.90E-02	8.60E-05	0.00E+00	3.10E-04	3.31E-03	6.72E-04	-1.02E-02
POCP	kg NMVOC eq.	1.47E-02	3.45E-05	0.00E+00	1.15E-04	1.26E-03	2.19E-04	-6.08E-03
ADP minerals and metals*	kg Sb eq.	4.23E-05	8.72E-09	0.00E+00	6.10E-08	2.85E-06	2.33E-07	-1.97E-05
ADP fossil*	MJ	7.99E+01	4.12E-02	0.00E+00	2.68E-01	5.41E+00	5.39E-01	-3.67E+01
WDP*	m ³	3.56E+00	1.47E-04	0.00E+00	1.10E-03	7.65E-02	2.27E-01	-1.93E+00
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.

Additional mandatory and voluntary impact category indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ eq.	3.89E+00	8.70E-02	0.00E+00	1.89E-02	4.31E-01	3.21E-01	-1.54E+00

Resource use indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
PERE	MJ	9.83E+00	1.44E-03	0.00E+00	4.39E-03	8.12E-01	4.41E-02	-2.19E+00
PERM	MJ	2.27E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.21E+01	1.44E-03	0.00E+00	4.39E-03	8.12E-01	4.41E-02	-2.19E+00
PENRE	MJ	8.38E+01	4.40E-02	0.00E+00	2.84E-01	5.72E+00	5.75E-01	-3.95E+01
PENRM	MJ	2.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	8.60E+01	4.40E-02	0.00E+00	2.84E-01	5.72E+00	5.75E-01	-3.95E+01
SM	Kg	9.83E+00	1.44E-03	0.00E+00	4.39E-03	8.12E-01	4.41E-02	-2.19E+00
RSF	MJ	2.27E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	1.21E+01	1.44E-03	0.00E+00	4.39E-03	8.12E-01	4.41E-02	-2.19E+00
FW	m ³	8.38E+01	4.40E-02	0.00E+00	2.84E-01	5.72E+00	5.75E-01	-3.95E+01
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							

Waste indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Hazardous waste disposed	Kg	1.57E-03	3.37E-07	0.00E+00	1.80E-06	3.65E-05	1.05E-05	-8.52E-04
Non-hazardous waste disposed	Kg	3.13E-01	2.32E-02	0.00E+00	1.27E-02	1.44E-01	1.84E-01	-1.03E-01
Radioactive waste disposed	Kg	9.92E-05	2.32E-08	0.00E+00	8.53E-08	1.99E-05	5.13E-07	-5.10E-05

Output flow indicators

Results per 1 kg of product								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Components for re-use	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	Kg	1.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy. electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy. thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ADDITIONAL ENVIRONMENTAL AND SOCIAL INFORMATION

In 2017, a 500 kWp photovoltaic system was installed on the rooftop of the factory where Excellens accessories are produced. In 2023, the system covered the 49% about of the electricity needs of the factory.



Always attentive to sustainability issues in their most complete vision (social, environmental and economic), in 2021 Tecnosystemi marks a new beginning by becoming a **Benefit Company**, thus rewriting its corporate purpose and officially declaring its serious intention to generate a positive impact on the environment and the community, continuing a path that had already begun years earlier.

In 2023, Tecnosystemi carried out a major redevelopment of the areas outside the factories, designing a **real urban forest** signed by an internationally renowned landscape architect, João Ferreira Nunes, who interpreted the Company's vision and turned it into reality: circularity, sustainability, compensation, are the key elements of this project, designed for the entire community and all the people who work in the Company.



ANNEX I. Variation of results for mandatory indicators

As indicated by PCR, the range of variation in modules A-C more than 10% is given below for each mandatory indicator. These variations are mainly due to the different packaging configurations used for distribution, which can lead to different allocation values on the declared unit and, therefore, different results.

Indicator	Variation of results
Climate change - Total	-14,1%/+16,7%
Climate change - Fossil	-16,3%/+17,6
Climate change - Biogenic	-240,1%/+191,7%
Climate change - Land use and LU change	-28,0%/+30,2%
Acidification	-19,3%/+20,1%
Eutrophication, freshwater	-16,0%/+16,8%
Eutrophication, marine	-20,0%/+20,1%
Eutrophication, terrestrial	-20,7%/+21,8%
Photochemical ozone formation	-16,3%/+19,0%
Resource use, minerals and metals	-13,6%/+30,5%
Resource use, fossils	-12,8%/+16,8%
GWP-GHG	-16,6%/+17,6%
PERE	-30,1%/+13,1%
PERM	-72,1%/+109,7%
PERT	-37,5%/+27,0%
PENRE	-11,2%/+9,6%
PENRM	-79,0%/+311,9%
PENRT	-12,9%/+16,8%
FW	-17,3%/+19,5%
HWD	-6,3%/+14,9%
NHWD	-11,8%/17,8%
RWD	-8,6%/+12,0%
MFR	-100%/+312,5%

References

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- EN 15804:2012+A2:2019. Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.
- General Programme Instructions for the International EPD System, v. 4.0
- UNI EN ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations
- UNI EN ISO 14040:2021, Environmental management - Life cycle assessment - Principles and framework
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