

# **AENOR**



Environmental

**Product** 

Declaration

EN ISO 14025:2010

EN 15804:2012+A2:2019/AC:2021

MULTILAYER PIPING SYSTEM PEX-AL-PEX and PERT-AL-PERT with MULTIPEX and IXPRESS2 FITTINGS

Date of first issue: 2025-02-28 Expiry date: 2030-02-27

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Registration code: GlobalEPD EN15804-117

The results of this EPD are an average of the analysed products



INDUSTRIAL BLANSOL, S.A.



The holder of this Declaration is responsible for its content, as well as for keeping the supporting documentation during the period of validity that justifies the included data and statements



#### **Holder of the Declaration**

INDUSTRIAL BLANSOL S.A.
Polígono Industrial Ambrosero, parcela 19
39791 Bárcena de Cicero
CANTABRIA (Spain)

Tel. (+34) 94 220 52 00 Mail contact@barbi.es Web www.blansol.es



#### **LCA Study**

IK INGENIERÍA Avenida cervantes, 51 – edificio 10 – 5º dpto 7 48970 Basauri (Bizkaia)

Tel. (+34) 94 418 17 46
Mail <u>ik@ik-ingenieria.com</u>
Web www.ik-ingenieria.com/es/

### **AENOR**

#### **GlobalEPD Programme Operator**

AENOR CONFÍA, S.A.U C/ Génova 6 28004 – Madrid Spain

Tel. (+34) 902 102 201 Mail aenordap@aenor.com Web www.aenor.com

AENOR is a founding member of ECO Platform, the European Association of Environmental Product Declaration Verification Programmes

The European Standard EN 15804:2012+A2:2019/AC:2021 is the basis for PCRs

Independent verification of the declaration and data in accordance with EN ISO 14025:2010

□Internal ⊠External

Verification Body

### **AENOR**

Certification Organization accredited by ENAC with accreditation N° 1/C-PR468





### 1. General Information

### 1.1 The organisation

INDUSTRIAL BLANSOL, S.A. is a leading company in Europe specialized in the manufacture of cross-linked polyethylene (PEX) and multilayer pipe systems, The company is one of the only European manufacturers who offers complete systems as Blansol does not only produce the pipes but also a variety of fitting systems for sanitary applications. The main advantage of Blansol for their clients is the guarantee of a complete system, pipes and fittings that the company produces at their production plants of Bárcena de Cicero (Cantabria) and Palau de Plegamans (Barcelona), factories which are equipped with the most modern technology and are totally automatized.

The Company combines innovation and business tradition, maintaining a close relationship with its customers, mane of whom have relied on its products for decades. BLANSOL operates under well-known brands such as Barbi, EasyPress, IxPress2, MultiPEX and Rayper, and exports to more than 30 countries, including France, Germany, Italy, United Kingdom, Mexico, Brazil, India...

BLANSOL is the local manufacturer of reference, as it produces all the pipes and fittings in its factories located in Cantabria and Barcelona (Spain). Always focusing on the circular economy, we look for raw material suppliers nearby.

Committed to sustainability and quality, BLANSOL has ISO 9001:2015 and ISO 14001:2015 certifications issued by AENOR, guaranteeing efficient processes and long-lasting investment in advanced machinery and the development of unique systems, adapting to the demands of the global market.

The quality of BLANSOL's products and services is certified in several countries, which have distinguished the company's excellence with their certifications: AENOR (Spain), QB (France), WRAS (UK).

### 1.2. Scope of the Declaration

This Environmental Product Declaration describes environmental information relating to the life cycle from cradle-to-gate production, including end-of-life options and benefits beyond the system, i.e. A1, A2, A3, C1, C2, C3, C4 and D. The analysis addresses the cross-linked and multilayer polyethylene piping systems produced by BLANSOL. This EPD covers the main PEX-AI-PEX and PERT-AI-PERT pipe systems for sanitary applications.

### 1.3. Life cycle and compliance.

This EPD has been developed and verified in accordance with UNE-EN ISO 14025:2006 and UNE-EN 15804:2012+ A2:2019/AC:2021 and the following Category Rule:

INFORMATION ABOUT THE RULES OF PRODUCT CATEGORY					
Descriptive Title	Sustainability in construction. Environmental Product Declarations. Basic product category rules for construction products				
Registration code and version	UNE-EN 15804:2012+ A2:2019/AC:2021				
Date of issue	2021				
Compliance	UNE-EN 15804:2012+ A2:2019/AC:2021				
Programme Manager	AENOR				



This Environmental Statement includes the following life cycle stages:

### Limits of the system. Information modules considered

Considered						
A1	Supply of raw materials	Х				
A2	Transport to the factory	Х				
А3	Manufacturing	Х				
A4	Transport to construction	MNE				
A5	Installation / construction	MNE				
B1	Use	MNE				
B2	Maintenance	MNE				
B3 Repair		MNE				
В4	B4 Replacement					
B5	Rehabilitation	MNE				
В6	In-service energy use	MNE				
В7	In-service water use	MNE				
C1	Deconstruction / demolition	Х				
C2	Transport	Х				
C3 Waste treatment		Х				
C4	Elimination	Х				
D	Potential for reuse, recovery and/or recycling	Х				
	A2 A3 A4 A5 B1 B2 B3 B4 B5 C1 C2 C3 C4 D = Mo	A2 Transport to the factory  A3 Manufacturing  A4 Transport to construction  A5 Installation / construction  B1 Use  B2 Maintenance  B3 Repair  B4 Replacement  B5 Rehabilitation  B6 In-service energy use  B7 In-service water use  C1 Deconstruction / demolition  C2 Transport  C3 Waste treatment  C4 Elimination  Potential for reuse, recovery				

This EPD may not be comparable with those ones developed in other Programmes or according to different reference documents, in particular it may not be comparable with EPDs not developed according to UNE-EN 15804:2012+A2:2019/AC:2021.

In addition to this, these EPDs may not be comparable if the origin of the data is different (e.g. databases), nor all relevant information modules are included or they are not based on the same scenarios.

The comparison of construction products must be made on the same function, applying the same functional unit and at the level of the building (for architectural or engineering work), i.e. including the behaviour of the product throughout its life cycle, as well as the specifications of section 6.7.2 of UNE-EN ISO 14025.





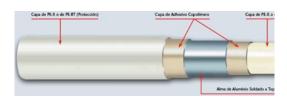
### 2. The Product

#### 2.1. Product Identification

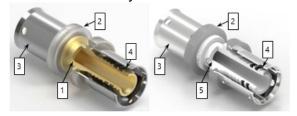
This EPD covers the main multilayer pipe systems PEX-Al-PEX and PERT-Al-PERT with the necessary fittings. These systems are used in domestic hot water (DHW), plumbing and heating installations.

The system is composed by the following components:

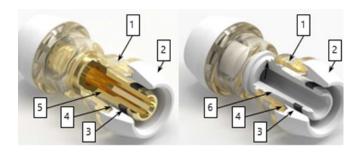
 PEX-Al-PEX and PERT-Al-PERT pipes: Multilayer pipes composed by two external and internal layers of polyethylene (PEX or PERT) and an intermediate layer of aluminium.



- MULTIPEX Press-Fitting Fittings: MULTIPEX fittings are especially designed to be joined with multilayer MULTIPEX pipes (PEX-AI-PEX and PERT-AI-PERT) thanks to the pressfitting system. They are composed by:
  - 1. Brass body (CW617N)
  - 2. Insulating ring (PPH)
  - 3. Stainless Steel bushing (AISI 304)
  - 4. O-ring
  - 5. PPSU body



- IXPRESS2 Push-Fit Fittings: Tool-free fitting for plumbing and heating installations based on Push-fit technology. They are composed by:
  - 1. Lower cap (transparent PPSU)
  - 2. Upper cap (transparent PPSU)
  - 3. Biconical profile O-ring
  - 4. Stainless steel retaining ring (AISI 316)
  - 5. Brass body (CW617N)
  - 6. PPSU body



UN CPC Code: 36320 - Pipes and pipe fittings, made of plastic



### 2.2. Product Performance

The manufacturer declares the following information on the technical specifications of the product:

System performance

Feature	Value	Units
Linear Dilatation	0.025	K <sup>-1</sup>
Thermal Conductivity	0	W/mK
Maximum Working Temperature	95	°C
Maximum Point Temperature	110	°C
Maximum Working Pressure at 95°C PEX-AI-PEX	10	bar
Maximum Working Pressure at 95°C PERT-Al-PERT	6	bar
Roughness	0.0004	mm
Density	1.47	g/cm <sup>2</sup>
Oxygen Permeability	0	%
Cross-Linking Degree PEX-AI-PEX	>65	%

Both the materials used and the pipes and fittings manufactured comply with the specifications of the applicable standards:

- EN-ISO 15875-2: Plastics piping systems for hot and cold water installations - Crosslinked polyethylene (PE-X) - Part 2: Pipes
- RP 01.03: Particular Regulations of the AENOR N Mark for cross-linked polyethylene (PE-X) piping systems for hot and cold water installations.
- EN-ISO 10147: Pipes and fittings made of crosslinked polyethylene (PE-X) -Estimation of the degree of crosslinking by determination of the gel content.

- EN-ISO 1167: Thermoplastics pipes, fittings and assemblies for the conveyance of fluids. Determination of the resistance to internal pressure.
- EN-ISO 2505: Thermoplastics pipes -Longitudinal reversion - Test method and parameters.
- EN-ISO 19892: Plastics piping systems -Thermoplastics pipes and fittings for hot and cold water - Test method for the resistance of joints to pressure cycling.
- EN-ISO 19893: Plastics piping systems -Thermoplastics pipes and fittings for hot and cold water - Test method for the resistance of mounted assemblies to temperature cycling.
- EN-ISO 3503: Plastics piping systems -Mechanical joints between fittings and pressure pipes - Test method for leak tightness under internal pressure of assemblies subjected to bending.
- EN-ISO 13056: Plastics piping systems -Pressure systems for hot and cold water -Test method for leak tightness under vacuum.
- EN-ISO 3501: Plastics piping systems Mechanical joints between fittings and
  pressure pipes Test method for
  resistance to pull-out under constant
  longitudinal force.



### 2.3. Product Composition

The declared composition by the manufacturer is as follows per kg of pipe or fitting:

PEX-AL-PEX multilayer pipe Composition

Substance/ Component	Content	Units		
PE	68	%		
Aluminium	24	%		
Additives	8	%		
Packaging Materials	Weight, kg	Weight, % (1 kg of product)		
Plastic	7.06E-03	0.71		
Cardboard / Paper	3.32E-02	3.32		
Wood	1.01E-01	10.11		

PERT-AL-PERT multilayer pipe Composition

Substance/ Component	Content	Units		
PE	73	%		
Aluminium	22	%		
Additives	5	%		
Barrian Control		10/ 1 1 4 0/ //		
Packaging Materials	Weight, kg	Weight, % (1 kg of product)		
	<b>Weight, kg</b> 7.63E-03			
Materials		kg of product)		

**MultiPEX Press-Fitting Composition** 

Substance/ Component	Content	Units
Brass	67	%
PPSU	5	%
Stainless steel	26	%
PPH	2	%
Additives	0.5	%
Packaging Materials	Weight, kg	Weight, % (1 kg of product)
Plastic	7.63E-03	0.76
Cardboard / Paper	3.58E-02	3.58
Wood	1.09E-01	10.93

ixPress2 Push-fit Composition

Substance/ Component	Content	Units
Brass	56	%
PPSU	41	%
Stainless Steel	3	%
Additives	1	%
Packaging Materials	Weight, kg	Weight, % (1 kg of product)
Plastic	7.85E-03	0.79
Cardboard / Paper	3.54E-02	3.54
Wood	9.72E-02	9.72

None of the components of the final product are included in the Candidate List of Substances of Very High Concern (SVHC) for authorisation or subject to other regulations.



### 3. Information about LCA

### 3.1. Life Cycle Analysis

This EPD is based on a "cradle to gate + C1-C4 and D" Life Cycle Assessment carried out according to the recommendations and requirements of the international standards ISO 14040:2006 and ISO 14044:2006 and the European Standard EN 15804:2012+A2:2019/AC:2021.

The Life Cycle Assessment Report for this EPD was carried out by IK Ingeniería in 2024.

This EPD covers the "cradle to gate + C1-C4 and D" Life Cycle stages:

- A1, extraction and processing of the used raw materials
- A2, transport of raw materials to the factory.
- A3, production of the pipe system
- C1, demolition of the structure at the end of its life.
- C2, Transport to manager of the structure at end of life
- C2, Transport of the steel structure to its end of life.
- C3, waste treatment and recycling.
- C4, final disposal.
- D, environmental benefits and burdens from feedstock recycling beyond the system boundary

### 3.2. Declared Unit

According to the guidelines set by the standard, this declaration refers to the production of 1 kg of pipe system. This 1 kg of system is composed by, 0.75 kg of pipe, 0.24 kg of Press-Fitting Multipex and 0.01 kg of Push-fit IxPress.

### 3.3. Reference Service Life (RSL)

Reference Service Life (RSL) of the analysed system is not specified as it is a cradle-to-gate WTP with options.

### 3.4. Criterios de asignación

Where necessary, an allocation of system inputs and outputs based on physical properties (mass) has been applied. It has not been necessary to apply economic allocation criteria. The gross weight/volume of all materials used in the production process of the analysed system has been included.

## 3.5. Representativeness, Quality and Data Selection

To model the pipe manufacturing process, the production data from the facilities of Industrial located Blansol, S.A. in Ambrosero (Cantabria) and Palau (Barcelona) were used. Detailed data was collected from these factories relating to: the consumption of raw (cross-linked materials polyethylene, aluminium, adhesives...) and energy; the emissions generated during the production process; and the quantity and type of generated waste, including its management and recovery, in accordance with the applicable regulations.

All the data referring to the consumption of the internal processes of the project come from company measurements, and they are representative of a normal and current operation of the studied service. All inputs and outputs of the system have been allocated per kg of produced product.

The collection of factory data corresponds to the period 01/01/2023 until 31/12/2023. The electricity mix corresponds to the year 2023. In this study, no data sets older than 10 years have been used. In addition to this, Ecoinvent 3.10





has been used, which is the most comprehensive and highest quality European life cycle inventory database, as it contains the most extensive information. Its scope coincides with the geographical, technological and temporal scope of this project. The LCA has been modelled with Simapro 9.6.0.1 using the method defined by "EN 15804 +A2 LCIA & LCI indicators". The impacts of energy resources were analysed using the "Cumulative Energy Demand (CED)" methodology, the "Environmental Design of Industrial Products (EDIP)" methodology was used to analyse the impacts of waste and water consumptions obtained using the "Recipe Midpoint" methodology. The characterisation factors correspond to those established in the EN15804: 2012 + A2:2019/AC:2021 and EF 3.1 standards.

- Time coverage: The data collection was carried out during the period 01/01/2023 to 31/12/2023. The generic data used are current and have been obtained from the Ecoinvent 3.10 databases, which are less than 10 years old (www.ecoinvent.org).
- Geographical coverage: The used data are representative of the region where the analysed service is carried out. Data collection has been carried out for each of the considered production plants. The data set was analysed to ensure that it was representative of the process or used material. Regarding the transport, the Ecoinvent 3.10 database was used, which has global standard emissions.
- The data for electricity generation were obtained from the electricity mix of the retailer published by the national commission for markets and competition (https://gdo.cnmc.es/CNE/resumenGdo. do?anio=2023) and they represent the energy consumption profile of that retailer.

Technology coverage: It reflects the physical reality of the declared product o group of products. Data for all life cycle stages are characteristic for these products. The generic data were obtained from the Ecoinvent 3.10 database and it represents technological processes similar to those used for fuel productions, feedstock and auxiliary input production and transport.

The data quality assessment has been performed according to EN15804: 2012 + A2:2019/AC:2021, Table E.1: Data quality level and criterion of the UN global environmental guidelines on the development of LCI databases. The quality of the data is as follows.

- Module A1: Raw material extraction, it is very good.
- Module A2: Transport is good.
- Module A3: Manufacturing is very good.
- Modules C1 to C4:, end of life, good
- Module D: it is good.

# 3.6. Other calculation rules and hypothesis

This EPD expresses the average performance of the described systems in section 2.1. For the calculation of the average performance, the arithmetic average of the analysed systems has been used. The variability of the results of the 2 analysed systems in the impact category GWP-total-IPCC in modules A1-A3 is 5%

### 3.7. Cut-off criteria

ISO 14025 and EN 15804:2012 + A2 indicate that life cycle inventory data should include a minimum of 95% of the total inputs (material and energy). In this study, the cutoff criterion has been applied to auxiliary lubricants in the production process.



### 4. System Limits, scenarios and additional technical information.

# 4.1. Previous production processes (upstream) and production of product (A1-A3)

The manufacturing process of the multilayer starts with the extrusion polyethylene resin and additives. A layer of adhesive is applied to the outer surface and the aluminium layer is welded. A new layer of adhesive is applied, the outer polyethylene layer is extruded and the tube is rolled up. The pipes are then cut and packed for subsequent shipment to the warehouse. The metal elements are forged, machined and then assembled. To produce the plastic elements, the raw material is injected and then it is assembled. The final products are delivered to the warehouse from each production area.

### 4.2. Construction process

Not evaluated module (NEM).

## 4.3. Linked use to the building structure

Not evaluated module (NEM).

# 4.4. Linked use to the operation of the building.

Not evaluated module (NEM).

### 4.5. End of life stage

In the end-of-life stage, modules C1, C2, C3 and C4 have been considered. The included scenarios are currently in use and are representative of one of the most likely alternatives. The established scenarios for this module are as follows:

- Dismantling / demolition (C1 module):
   Not considered relevant as it is a structural product.
- Transport (C2 module): With a collection rate of 100%, transports are carried out by lorry (EURO 5) over 50 km.

Waste processing and disposal (C3 and C4 modules). Annex C if the European Commission documents relating to the Environmental Footprint (https://epica.jrc.ec.europa.eu/LCDN/de veloperEF.html) states that the recycling ratio for water supply pipes is zero, with the exception of copper, which has a ratio of 95%. Therefore, in module C3, only the recycling of brass and stainless Steel is going to be considered, due to its economic value. It is expected to be one of the few materials to be recovered and it is in line with what is established in Annex C of the Environmental Footprint established bv the European Commission.

#### End of life

Parameter	Unit (expressed per functional unit)
Collection process,	1.00E+00 kg separately collected
specified by type	0.00E+00 kg collected with mixed construction waste
	0.00E+00 kg for reuse
Recovery system,	2.31E-01 kg for recycling
specified by type	0.00E+00 kg for energy recovery
Elimination, specified by type	7.69E-01 kg product or material for final disposal
Hypothesis for scenario development (e.g. transport)	lorry 16-32 metric ton, EURO5

# 4.6. Benefits and burdens beyond the system

D module contains benefits from the recycling of brass and stainless steel in C3 module. These metals are attributed the avoided production of raw material that would be consumed in the technosphere (raw material). In order to calculate the benefits beyond the system (D module) the formula given in 15804:2012 +A2:2019 / AC:2021 document has been used.



### 5. LCA and LCI Environmental parameter statements.

### 5.1 Environmental impacts.

The estimated impact results are relative and do not indicate the final value of the impact categories, nor do they refer to threshold values, safety margins or risks.

Parameter	Units	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	6.32E+00	0.00E+00	9.68E-03	5.03E-05	9.01E-02	-1.18E+00
GWP-fossil	kg CO2 eq	6.27E+00	0.00E+00	9.68E-03	4.96E-05	9.01E-02	-1.17E+00
GWP-biogenic	kg CO2 eq	1.13E-02	0.00E+00	1.72E-06	7.18E-07	3.26E-06	-2.90E-03
GWP-luluc	kg CO2 eq	3.51E-02	0.00E+00	3.17E-06	3.00E-08	1.55E-06	-1.90E-03
GWP-total-IPCC	kg CO2 eq	6.32E+00	0.00E+00	9.68E-03	5.03E-05	9.01E-02	-1.18E+00
ODP	kg CFC11 eq	1.25E-07	0.00E+00	1.92E-10	1.39E-12	2.56E-10	-1.05E-08
AP	mol H+ eq	8.68E-02	0.00E+00	3.03E-05	5.03E-07	5.04E-05	-6.39E-02
EP-freshwater	kg P eq	4.40E-04	0.00E+00	7.44E-08	1.87E-09	6.13E-08	-2.89E-04
EP-marine	kg N eq	6.86E-03	0.00E+00	1.01E-05	1.10E-07	2.74E-05	-3.39E-03
EP-terrestrial	mol N eq	8.66E-02	0.00E+00	1.11E-04	1.26E-06	2.28E-04	-4.79E-02
POCP	Kg NMVOC eq	3.29E-02	0.00E+00	4.74E-05	3.90E-07	1.09E-04	-1.36E-02
ADP-minerals& metals <sup>1</sup>	kg Sb eq	9.34E-04	0.00E+00	3.09E-08	3.44E-09	1.66E-08	-8.71E-04
ADP-fossil <sup>1</sup>	MJ	1.11E+02	0.00E+00	1.36E-01	2.68E-03	1.79E-01	-1.45E+01
WDP <sup>1</sup>	m3 worl eq depriv	4.41E+00	0.00E+00	7.57E-04	3.05E-04	-1.46E-01	-1.15E+00

GWP - total: Global warming potential; GWP - fossil: Global warming potential of fossil fuels; GWP - biogenic: Biogenic global warming potential; GWP - luluc: Global warming potential from land use and land change of use; ODP: Stratospheric ozone depletion potential; AP: Acidification potential, cumulative surplus; EP-freshwater: Eutrophication potential, fraction of nutrients that reach the final compartment of fresh water; EP-marine: Eutrophication potential, fraction of nutrients that reach the final compartment of marine water; EP-terrestrial: Eutrophication potential, cumulative surplus; POCP: Photochemical ozone creation potential; APP-minerals&metals: Abiotic depletion potential for minerals and metals; APD-fossil: Abiotic depletion potential for fossil resources; WDP: Water deprivation potential (user), consumption of pondered privation of water. NR: Not relevant.

Warning 1: The results of this environmental impact indicator should be used with caution, as the uncertainties of the results are high and experience with this parameter is limited





#### 5.2 Use of resources

Parameter	Units	A1-A3	C1	C2	C3	C4	D
PERE	MJ	1.30E+01	0.00E+00	2.30E-03	2.66E-03	1.76E+00	-3.73E+00
PERM	MJ	1.76E+00	0.00E+00	0.00E+00	0.00E+00	-1.76E+00	0.00E+00
PERT	MJ	1.47E+01	0.00E+00	2.30E-03	2.66E-03	4.96E-03	-3.73E+00
PENRE	MJ	8.49E+01	0.00E+00	1.36E-01	2.68E-03	2.65E+01	-1.45E+01
PENRM	MJ	2.63E+01	0.00E+00	0.00E+00	0.00E+00	-2.63E+01	0.00E+00
PENRT	MJ	1.11E+02	0.00E+00	1.36E-01	2.68E-03	1.79E-01	-1.45E+01
SM	kg	4.52E-02	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
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m³	1.08E-01	0.00E+00	1.86E-05	8.89E-06	-3.40E-03	-2.88E-02

**PERE:** Primary energy renewable, energy resources; **PERM:** Primary energy renewable, material; **PERT:** Primary energy renewable, total; **PENRE:** Primary energy non-renewable, energy resources; **PENRM:** Primary energy non-renewable, material; **PENRT:** Primary energy non-renewable, total; **SM:** Secondary materials; **RSF:** Renewable secondary fuels; **NRSF:** Non-renewable secondary fuels; **FW:** Flowing water; **NR:** Not relevant

### 5.3 Waste categories

Parameter	Units	A1-A3	C1	C2	C3	C4	D
HWD	kg	1.14E+00	0.00E+00	1.96E-04	5.45E-06	8.41E-03	-5.88E-01
NHWD	kg	3.66E+01	0.00E+00	4.13E-03	1.39E-04	4.38E+00	-1.94E+01
RWD	kg	2.72E-04	0.00E+00	4.33E-08	3.02E-08	6.27E-08	-3.36E-05

**HWD**: Hazardous waste disposed; **NHWD**: Non-hazardous waste disposed; **RWD**: Radioactive waste disposed; **NR**: Not relevant

### 5.4 Outflows

Parameter	Units	A1-A3	C1	C2	C3	C4	D
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	2.59E-01	0.00E+00	0.00E+00	1.03E-01	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU:Components for reuse; MFR: Materials for recycling; MER: Materials for energy recovery; EE: Exported energy; NR: Not relevant

### 5.5 Information about biogenic carbon content

Biogenic carbon content	Units	Result per declared functional unit
Biogenic carbon content - product – Kg C	Kg C	0.00E+00
Biogenic carbon content - packaging - Kg C	Kg C	6.16E-02





### 6. Additional environmental information.

1-Impact of electricity consumption by specific supplier: 4.42E-01 kg CO2e/kWh.

2-Natural gas impact: 7.30E-03 kg CO2e/MJ.



**AENOR** 

### References

- [1] General Instructions for the GlobalEPD Programme, 3rd revision 09-10 2023
- [2] EN ISO 14025:2010 Environmental labels and declarations Type III environmental declarations Principles and procedures (ISO 14025:2006).
- [3] EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works Environmental product declarations Core rules for the product category of construction products.
- [4] EN ISO 14040. Environmental management Life cycle assessment Principles and framework. 2006.
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