

GlobalEPD

A VERIFIED ENVIRONMENTAL DECLARATION



Environmental
Product
Declaration

ISO 14025:2010

EN 15804:2012+A2:2020

AENOR

Stainless steel cable tray systems: Pemsaband® and Megaband®, Covers and Supports

Date of first issue: 2025-03-14

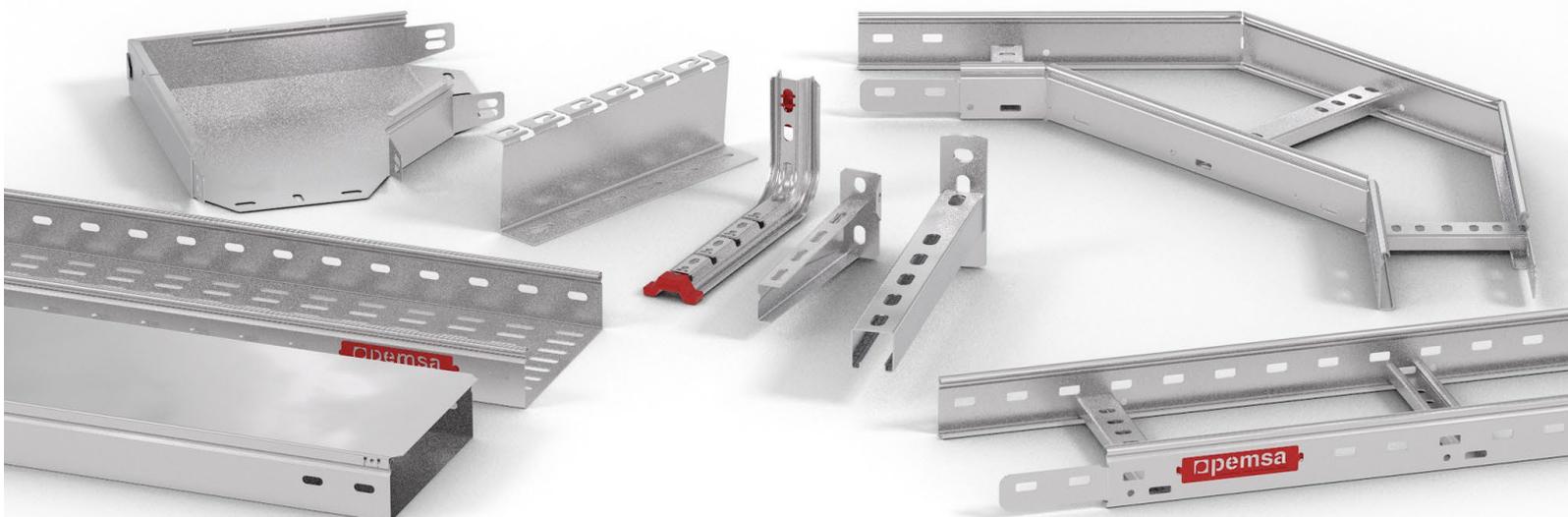
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The logo features a red square with a white circle inside, followed by the word 'pemsa' in a bold, black, lowercase sans-serif font.

PEMSA CABLE MANAGEMENT S.A.



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



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UNE-EN 15804:2012+A2:2020

Independent third-party verification of the declaration and data, according to ISO 14025:2010

Internal External

Verification body

AENOR

Product certification body accredited by ENAC with accreditation No. 1/C-PR468

1. General Information

1.1. The organisation.

Pemsa Cable Management, specialist in cable management systems since 1969, leaders in the Spanish market and great international expansion thanks to its high quality, innovation and product development.

Pemsa has a deep knowledge of the sector, which allows it to respond to present and future needs, adapting to the needs of the market.

Pemsa is located in Spain, with its headquarters in Madrid and subsidiaries around the world located in the United Kingdom, France, Portugal and Colombia, present in more than 50 countries.

The organisation has four production centres equipped with their own automation systems.

The numerous certifications that the company has endorse the commitment acquired to quality, safety and sustainability.

Pemsa products are designed and manufactured under rigorous quality controls. Its quality management and environmental management systems are certified under the standards of the UNE-EN-ISO 9001:2015 and UNE-EN-ISO 14001:2015 standards, respectively.

Its important range of products complies with the safety requirements of the European Directive 2014/35/EU for low-voltage installations, with the European Directive 2015/863 regarding the restriction of hazardous substances and with the REACH Regulation (EC) No. 1907/2006 on the restriction of chemical substances.

1.2. Scope of the Declaration.

This environmental product declaration describes environmental information relating to the life cycle of cradle-to-door modules C and D (modules A1-A3, C1-C4 and D), of the Pemsaband® and Megaband® Stainless Steel Cable Tray Systems manufactured by Pemsa at its facilities in Alcalá de Henares (Madrid):

The function performed by the product system studied is the production of the cable tray system for use as a cable guide and support element in electrical installations in the construction sector.

1.3. Lifecycle and compliance.

This EPD has been developed and verified in accordance with ISO 14025:2010 and EN 15804:2012+A2:2020.

Table 1-1. Product Category Rule

| | |
|-----------------------------|---|
| Title | Sustainability in construction. Environmental product declarations. Basic product category rules for building products. |
| Registration/Version | EN 15804:2012+A2:2020/AC:2021 |
| Issue date | 2020-03 |
| Administrator | AENOR |

This EPD includes the life cycle stages listed in Table 1-2. This EPD is of the cradle-to-gate type with modules C and D.

Table 1-2. System limits. Information modules considered

| | | | |
|---|----|------------------------------------|-----|
| Product Stage | A1 | Raw materials supply | X |
| | A2 | Transport | X |
| | A3 | Manufacturing | X |
| Construction | A4 | Transport | MND |
| | A5 | Installation/Construction | MND |
| Stage of use | B1 | Use | MND |
| | B2 | Maintenance | MND |
| | B3 | Repair | MND |
| | B4 | Replacement | MND |
| | B5 | Refurbishment | MND |
| | B6 | Operational energy | MND |
| | B7 | Operational water | MND |
| End of life | C1 | Deconstruction/demolition | X |
| | C2 | Transport | X |
| | C3 | Waste processing | X |
| | C4 | Disposal | X |
| | D | Reuse-Recovery-Recycling potential | X |
| X = Module included in the LCA; NR = Module not relevant; MND = Undeclared Module | | | |

This EPD may not be comparable with those developed in other EPD Programmes or according to different reference documents; in particular, it may not be comparable with Declarations not developed and verified in accordance with EN 15804.

EPDs may not be comparable if the source of the data is different (e.g. databases), not all relevant information modules are included, or 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 (or architectural or engineering work), that is, including the behaviour of the product throughout its life cycle, as well as the specifications of section 6.7.2 of ISO 14025.

1.4. Differences with previous versions of this EPD.

There are no previous versions of this EPD.

2. Product Information

2.1. Product identification.

This EPD applies to stainless steel cable tray systems:

- Pemsaband® - tray and accessories
- Megaband® - cable ladder and accessories
- Inox covers
- Inox supports.

CPC Code: 4219 - Other structures (except prefabricated buildings) and parts of structures, of iron, steel or aluminium; plates, rods, angles, shapes, sections, profiles, tubes and the like, prepared for use in structures, of iron, steel or aluminium; props and similar equipment for scaffolding, shuttering or pitpropping.

Table 2-1 Product Description

| Product | Description |
|-----------------------|---|
| Pemsaband® | Pemsaband® perforated and solid sheet cable tray system in AISI 304 and 316L stainless steel, including all its ranges (Pemsaband® One and Pemsaband® Marine) |
| Accesorios Pemsaband® | Accessories for Pemsaband® sheet metal cable tray in AISI 304 and 316L stainless steel. |
| Megaband® | Megaband® cable ladder system with welded rungs in AISI 304 and 316L stainless steel. |
| Accesorios Megaband® | Accessories for Megaband® cable ladder in AISI 304 and 316L stainless steel. |
| Cover | Straight cover for protection of straight sections of metal trays in AISI 304 and 316L stainless steel. |
| Supports | Range of omega universal SPLUS supports, RPLUS reinforced cantilevers, Rail 41 cantilevers and struts for wall/ceiling/floor mounting of trays in AISI 304 and 316L stainless steel |

The raw materials used are stainless steels based on the following materials, standards and corrosion resistance classification:

Table 2-2 Corrosion Resistance Rating

| Protection System | Material | Description | Standards | Corrosivity category (*) |
|-------------------|----------|---------------------------|---|--------------------------|
| INOX | 304 | Stainless steel AISI 304 | AISI 304 EN 10088-2 EN 10088-3 EN ISO 3506-1:2021 | C5 |
| | 316L | Stainless steel AISI 316L | AISI 316L EN 10088-2 EN 10088-3 EN ISO 3506-1:2021 | CX |

(*) ISO 9223 Environmental Classification

The products under the scope of this EPD comply with the European Low Voltage Directive (2014/35/EU) and with the European and international product standard applicable to cable tray systems (EN/IEC 61537).

2.2. Product composition.

The products for which this EPD is drafted are 100% stainless steel.

The manufacturer declares that during the life cycle of the product no hazardous substances listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorisation" are used at a rate greater than 0.1% of the weight of the product.

Primary packaging used in the shipment of the product (distribution packaging) has been included in the study.

Table 2-3 Distribution Packaging

| Material | Kg/unit declared |
|-----------------|------------------|
| Plastic straps | 6.73E-01 |
| LDPE Film | 2.06E-01 |
| Wood | 6.02E+01 |
| Paper/cardboard | 2.44E+00 |

3. LCA Information

3.1. Life cycle assessment.

The Life Cycle Assessment Report for the EPD of Pemsaband® and Megaband® stainless steel cable tray systems of Pemsa Cable Management S.A. has been carried out by the company Abaleo S.L. with the Ecoinvent 3.10 database and the SimaPro 9.6.0.1 software, which is the most up-to-date version available at the time of performing the LCA.

For the study, data from the Pemsa plant located in Alcalá de Henares (Madrid) has been used.

The LCA study follows the recommendations and requirements of ISO 14040:2006, ISO 14044:2006 and EN 15804:2012+A2:2020 as PCR.

3.2. Scope of the study.

This EPD is cradle-to-gate with modules C and D of the stainless-steel cable tray systems:

- Pemsaband® - tray and accessories
- Megaband® - tray and accessories
- Inox covers
- Inox supports.

3.3. Limitations of the study.

The following have not been included in the LCA:

- All equipment whose useful life is greater than 3 years.
- The construction of the plant buildings, or other capital goods.
- Staff business trips; or travel to or from work of the staff.
- Research and development activities.

3.4. Declared unity .

The declared unit is one tonne (1,000 kg) of product.

3.5. Reference Shelf Life (RSL).

Not specified because the use stage is not included in the EPD.

3.6. Allocation criteria.

In accordance with the criteria of the PCR, allocation of inputs and outputs of the system based on physical properties (mass) has been applied. This allocation criterion has been applied for general plant consumption (materials, fuel, water and energy), transport, packaging, emissions and waste.

It has not been necessary to apply economic allocation criteria.

3.7. Cut-off rule.

In accordance with the PCR criteria, the gross weight/volume of all materials used in the manufacturing process has been included in the LCA, so that at least 99% of the weight of the product unit is considered.

3.8. Representativeness, quality and selection of data.

To model the manufacturing process of Pemsa's cable tray systems, production data for the year 2023 has been used, which is a period with representative production data: material and energy consumption; transport and waste.

When necessary, the Ecoinvent 3.10 (March 2024) and EF Database 3.1 databases have been used, which are the latest versions available at the time of the LCA. For the inventory data, to model the LCA and to calculate the environmental impact categories required by the reference standard, the SimaPro 9.6.0.1 software has been used, which is the most up-to-date version available at the time of the study.

The following criteria have been applied to choose the most representative processes:

- The data must be representative of the technological development applied in the manufacturing processes. If no information was available, a data representative of an average technology has been chosen.
- Average regionalised data.
- The data should be as up to date as possible.

To assess the quality of the primary data used in the study, the criteria for semi-quantitative assessment of data quality, proposed by the European Union in its Guide to the Environmental Footprint of Products and Organizations, are applied. The results obtained are as follows:

- Very good integrity. Score 1.

- Good methodological suitability and coherence. Score 2.
- Very good temporal representativeness. Score 1.
- Good technological representativeness. Score 1.
- Very good geographical representativeness. Score 1.
- Data uncertainty is low. Score 1.

According to the above data, the Data Quality Rating (DQR) takes the following value: $7/6 = 1.17$, which indicates that the quality of the data is excellent.

To better understand the assessment of data quality, it is indicated that the score for each of the criteria varies from 1 to 5 (the lower the score, the higher the quality) and that the following table is applied to obtain the final score:

Table 3-1 Data Quality (DQR)

| Data Quality (DQR) score | Data quality score |
|--------------------------|----------------------|
| ≤ 1.6 | Excellent quality |
| 1.6 to 2.0 | Very good quality |
| 2.0 to 3.0 | Good quality |
| 3 to 4.0 | Reasonable quality |
| > 4 | Insufficient quality |

4. System boundaries, scenarios, and additional technical information.

4.1. Description of system boundaries.

In the product system of the Life Cycle Assessment of Pemsa cable tray systems, the following phases have been studied:

Module A1 - Production of raw materials.

This module includes the production process of raw materials, which considers:

- The extraction of resources and raw materials.
- Transport to the processing/production centres of raw materials.
- Energy and fuel consumption during the production of raw materials.

- The consumption of other resources (such as water) during the production of raw materials.
- The generation of waste and emissions into the air and discharges into water and soil, during the production of raw materials.
- The production of the electricity used in the manufacturing process.

Module A2 - Transport of raw materials to the factory.

The trucking of all raw materials has been considered, from the production sites (suppliers) to the Pemsa plant. The transport distances of the plants have been provided by the plant managers, knowing the location of the facilities of their suppliers.

Table 4-1. Information stages and modules for the evaluation of construction products.

| Life Cycle Information | | | | | | | | | | | | | | Additional information |
|--|-----------|---------------|----------------------------|---------------------------|--------------|-------------|--------|-------------|---------------|----------------------------|-----------|-----------------|----------|--|
| A1 to 3 | | | A4 - A5 | | B1 to 7 | | | | | C1 to 4 | | | | D |
| Product Stage | | | Stage Construction Process | | Stage of use | | | | | End-of-life stage | | | | Benefits and burdens beyond the system |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | C1 | C2 | C3 | C4 | D |
| X | X | X | MND | X | MND | MND | MND | MND | MND | X | X | X | X | X |
| Raw material supply | Transport | Manufacturing | Transport | Construction/Installation | Use | Maintenance | Repair | Replacement | Refurbishment | Deconstruction, demolition | Transport | Waste treatment | Disposal | Reuse-Recovery-Recycling potential |
| Stage | | | Stage | Stage | Stage | Stage | Stage | Stage | Stage | Stage | Stage | Stage | Stage | |
| B6. Operational Energy Use Scenario MND | | | | | | | | | | | | | | |
| B7. Operational Water Use Scenario MND | | | | | | | | | | | | | | |

X: Module evaluated

MND: Module not declared

Module A3 - Manufacturing.

In this stage, the consumption of auxiliary materials and general plant consumption has been considered; the production of the packaging necessary for the distribution of the product to the customer and its transport to the plant; emissions to water, and transport to the manager of the waste generated during this stage of the life cycle. The transport distances of the waste have been provided by those responsible for the plant, knowing the location of the facilities of its waste managers.

Module C1 – Deconstruction/demolition.

It has been considered that the deconstruction modulus (C1) is not relevant for the quantitative analysis. The consumption of material and energy for the deconstruction and extraction of Pensa products is included in the framework of the construction or civil works of which they are part.

Module C2 - Transport to the waste treatment/recovery site.

At the end of its useful life, the product under study is considered to be transported by road over an average distance of 100 km to the nearest waste management point, with EURO6 trucks of 16-32 tonnes.

Module C3 – Waste treatment, and Module C4 – Waste disposal.

To determine the percentages of recycling and sending to landfill and incineration of the products studied, the criteria of Part C of Annex 2 V2.1 (May 2020) of the Circular Footprint Formula of the European Union Environmental Footprint methodology (*COMMISSION RECOMMENDATION (EU) 2021/2279 of 15 December 2021, on the use of environmental footprint methods to measure and communicate the environmental performance of products and organizations throughout their life cycle*).

Board 4-2 Module C Parameters

| Parameter | Value (by you declared) |
|--|--|
| Demolition | It is considered that, during the process of deconstruction and dismantling of the products studied, the consumption of material and energy is included in the framework of the construction or civil works of which they are part |
| Collection process, specified by type | 1,000 kg collected separately. |
| | 0 kg collected with a mixture of construction waste. |
| Recovery system, specified by type | 0 kg for reuse. |
| | 850 kg for recycling. 0 kg for energy recovery. |
| Elimination, specified by type | 67.5kg for incineration |
| | 82.5 kg for final disposal. |
| Scenario-Developing Assumptions (Transportation) | Transport of waste by EURO6 truck of 16-32 tonnes: - Average distance of 100 km from the construction site to the management points. |

Module D - Benefits Beyond the System

It is assumed that the steel used from electric arcs has been obtained from scrap metal, so it does not generate environmental benefits beyond the limits of the system. The net balance corresponding to steel from blast furnaces is considered, excluding from the environmental benefit the percentage of scrap used as raw material in the Ecoinvent process used in the modelling (16.89%).

A loss of 10% of the material is assumed.

Waste subjected to recovery or recycling during the product stage is not included in the system limits of this module as it represents less than 1% of the declared unit.

4.2. Description of the manufacturing process.

The production process consists of the following phases:

Raw material reception and quality control

Carbon steel coils are received with predefined technical specifications. An initial quality control is carried out to verify compliance with the required regulations and standards, ensuring properties such as chemical composition, mechanical resistance and surface appearance.

Die-cutting and forming

The material is subjected to die-cutting operations by automated presses to obtain the required dimensions and perforations. Subsequently, the final shaping of the product is carried out.

Welding (Megaband® System)

For the Megaband® ladder tray system, the welding process is applied between the beams and crossbars that make it up.

Dimensional Quality Control

Regular in-line inspections and random sampling are carried out to check that the specified dimensional tolerances are met.

Degreasing, pickling and passivation

Chemical and electrolytic degreasing and pickling are carried out to remove greases, surface impurities, oxides and contaminants, ending with a passivation that improves the corrosion resistance of stainless steel.

Protective Coating Quality Control

Regular in-line and quality inspections of the surface treatment are carried out, which include both a detailed visual inspection to detect possible defects in the coating, and an accurate measurement of the thickness of the zinc applied. Thickness measurement is carried out using non-destructive methods.

Packaging

Once the quality controls have been passed, the product is packaged using recyclable packaging materials, designed to protect the product during handling and transport, guaranteeing structural and surface integrity until its destination.

Expedition

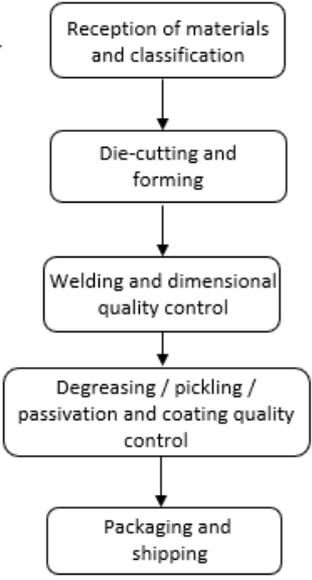
Products are tagged and arranged for distribution based on demand.

PRODUCT STAGE

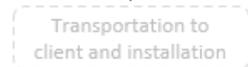
Materials production:
Steel

Packaging production:
Film, strapping, labels, wood

Energy production:
Electricity



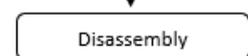
STAGE CONSTRUCTION PROCESS



STAGE OF USE



END-OF-LIFE STAGE



Transportation to end-of-life treatment



Image 1 Production process diagram.

5. Environmental performance information.

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

Mandatory environmental impact categories according to EN 15804 (reference package EF 3.1)

| Indicator | A1-A3 | C1 | C2 | C3 | C4 | D |
|----------------------------------|-----------|----------|----------|----------|----------|-----------|
| GWP-total | 5.31E+03 | 0.00E+00 | 1.52E+01 | 4.20E+00 | 8.02E-01 | -6.02E+02 |
| GWP-fossil | 5.42E+03 | 0.00E+00 | 1.52E+01 | 4.19E+00 | 8.01E-01 | -6.02E+02 |
| GWP-biogenic | -1.10E+02 | 0.00E+00 | 5.72E-04 | 7.03E-03 | 9.55E-04 | -4.01E-02 |
| GWP-luluc | 4.28E+00 | 0.00E+00 | 3.73E-04 | 8.72E-03 | 2.61E-05 | -8.07E-02 |
| ODP | 4.01E-05 | 0.00E+00 | 3.10E-07 | 6.62E-08 | 1.54E-08 | -2.33E-06 |
| AP | 2.70E+01 | 0.00E+00 | 1.77E-02 | 2.70E-02 | 5.88E-03 | -2.00E+00 |
| EP-freshwater | 1.90E-01 | 0.00E+00 | 1.27E-05 | 2.69E-04 | 2.85E-06 | -2.93E-02 |
| EP-marine | 4.75E+00 | 0.00E+00 | 3.93E-03 | 8.09E-03 | 2.70E-03 | -4.28E-01 |
| EP-terrestrial | 5.30E+01 | 0.00E+00 | 4.29E-02 | 8.92E-02 | 2.97E-02 | -5.04E+00 |
| POCP | 1.75E+01 | 0.00E+00 | 3.84E-02 | 2.72E-02 | 9.13E-03 | -1.77E+00 |
| ADP-minerals&metals ¹ | 1.09E-01 | 0.00E+00 | 5.02E-07 | 2.32E-07 | 3.22E-08 | -9.11E-05 |
| ADP-fossil ¹ | 6.13E+04 | 0.00E+00 | 2.00E+02 | 8.54E+01 | 1.06E+01 | -6.18E+03 |
| WDP ¹ | 1.73E+03 | 0.00E+00 | 8.37E-02 | 7.31E-01 | 1.36E-02 | -3.47E+01 |

GWP - total (kg CO2 eq.): Global warming potential; **GWP - fossil (kg CO2 eq.):** Global warming potential of fossil fuels; **GWP - biogenic (kg CO2 eq.):** Biogenic global warming potential; **GWP - luluc (kg CO2 eq.):** Global warming potential of land use and change; **ODP (kg CFC-11 eq):** Stratospheric ozone depletion potential; **AP (mol H+ eq):** Acidification potential, accumulated surplus; **EP-freshwater (kg Peq):** Eutrophication potential, fraction of nutrients that reach the final freshwater compartment; **EP-marine (kg N eq):** Eutrophication potential, fraction of nutrients that reach the final compartment of seawater; **EP-terrestrial (mol N eq):** Eutrophication potential, cumulative surplus; **POCP (kg NMVOC eq):** Tropospheric ozone formation potential; **ADP-minerals&metals (kg Sb eq):** Abiotic resource depletion potential for non-fossil resources; **ADP-fossil (MJ, v.c.n):** Abiotic resource depletion potential for fossil resources; **WDP (m3 eq):** Water deprivation potential (user), water-weighted deprivation consumption; **NR:** Not relevant.

Additional impact category indicators

| Indicator | A1-A3 | C1 | C2 | C3 | C4 | D |
|---------------------|----------|----------|----------|----------|----------|-----------|
| GWP-GHG* | 5.43E+03 | 0.00E+00 | 1.52E+01 | 4.20E+00 | 8.02E-01 | -6.02E+02 |
| PM | 4.22E-04 | 0.00E+00 | 8.98E-07 | 4.17E-07 | 2.18E-07 | -4.01E-05 |
| IRP ¹ | 1.47E+02 | 0.00E+00 | 2.73E-02 | 5.99E-01 | 1.36E-03 | -2.00E+00 |
| ETP-fw ² | 4.98E+04 | 0.00E+00 | 6.86E+00 | 5.92E+00 | 1.55E+01 | -5.23E+04 |
| HTP-c ² | 1.31E-04 | 0.00E+00 | 1.06E-09 | 1.01E-09 | 1.17E-09 | -1.99E-04 |
| HTP-nc ² | 8.88E-05 | 0.00E+00 | 1.01E-07 | 1.76E-08 | 4.46E-09 | -1.83E-06 |
| SQP ² | 2.47E+04 | 0.00E+00 | 4.49E-01 | 9.54E+00 | 1.03E+01 | -5.71E+02 |

GWP - GHG (kg CO₂ eq.): Global warming potential excluding biogenic CO₂; **PM (disease incidence):** Potential incidence of diseases due to particulate matter emissions; **IRP (kBq U235 eq):** Exposure efficiency of human potential relative to U235; **ETP-fw (CTUe):** Comparative toxic unit potential for ecosystems - freshwater; **HTP-c (CTUh):** Comparative Toxic Unit Potential for Ecosystems - Carcinogenic Effects; **HTP-nc (CTUh):** Comparative toxic unit potential for ecosystems - non-carcinogenic effects; **SQP (Pt):** Soil quality potential index.

1. This category of impact deals primarily with the eventual impacts of low doses of ionizing radiation on human health from the nuclear fuel cycle. It does not consider the effects due to possible nuclear accidents or occupational exposure due to the disposal of radioactive waste in underground facilities. The potential for ionizing radiation in the soil, due to radon or some building materials, is not measured in this parameter either

2. 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.

*This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.

Resource use Indicators

| Indicator | A1-A3 | C1 | C2 | C3 | C4 | D |
|-----------|----------|----------|----------|----------|----------|-----------|
| PERE | 1.39E+04 | 0.00E+00 | 6.96E-01 | 1.54E+01 | 4.08E-02 | -6.63E+01 |
| PERM | 2.60E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | 1.39E+04 | 0.00E+00 | 6.96E-01 | 1.54E+01 | 4.08E-02 | -6.63E+01 |
| PENRE | 6.13E+04 | 0.00E+00 | 2.00E+02 | 8.54E+01 | 1.06E+01 | -6.18E+03 |
| PENRM | 2.04E+03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | 6.34E+04 | 0.00E+00 | 2.00E+02 | 8.54E+01 | 1.06E+01 | -6.18E+03 |
| SM | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FW | 4.67E+01 | 0.00E+00 | 5.14E-03 | 5.57E-02 | 5.43E-04 | -1.04E+00 |

PERE (MJ, v.c.n.): Use of renewable primary energy excluding renewable primary energy resources used as feedstock; **PERM (MJ, v.c.n.):** Use of renewable primary energy used as feedstock; **PERT (MJ, v.c.n.):** Total use of renewable primary energy; **PENRE (MJ, v.c.n.):** Use of non-renewable primary energy, excluding non-renewable primary energy resources used as feedstock; **PENRM (MJ, v.c.n.):** Use of non-renewable primary energy used as feedstock; **PENRT (MJ, v.c.n.):** Total use of non-renewable primary energy; **SM (kg):** Use of secondary materials; **RSF (MJ, v.c.n.):** Use of renewable secondary fuels; **NRSF (MJ, v.c.n.):** Use of non-renewable secondary fuels; **FW (m³):** Net use of piped water resources; **NR:** Not relevant.

Waste indicators

| Indicator | A1-A3 | C1 | C2 | C3 | C4 | D |
|-----------|----------|----------|----------|----------|----------|-----------|
| HWD | 1.51E-01 | 0.00E+00 | 1.33E-03 | 2.17E-04 | 6.88E-05 | -6.78E-02 |
| NHWD | 1.81E+02 | 0.00E+00 | 6.11E-03 | 3.91E-02 | 1.27E+02 | -3.87E+00 |
| RWD | 9.56E-02 | 0.00E+00 | 1.88E-05 | 4.86E-04 | 8.97E-07 | -1.37E-03 |

HWD (kg): Hazardous waste disposed of; **NHWD (kg):** Non-hazardous waste disposed of; **RWD (kg):** Radioactive waste disposed of; **NR:** Not relevant.

Out flow indicators

| Parameter | A1-A3 | C1 | C2 | C3 | C4 | D |
|-----------|----------|----------|----------|----------|----------|----------|
| CRU | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MFR | 7.14E+01 | 0.00E+00 | 0.00E+00 | 8.50E+02 | 0.00E+00 | 0.00E+00 |
| MER | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| EEA | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| TSE | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

CRU (kg): Components for reuse; **MFR (kg):** Materials for recycling; **MER (kg):** Materials for energy recovery; **EE (MJ):** Exported energy; **NR:** Not relevant.

Biogenic carbon content

| | Stainless steel cable tray systems |
|------------------------------|------------------------------------|
| Product – Kg/declared unit | 0 |
| Packaging - Kg/declared unit | 3.13E+01 |

6. Additional environmental information.

6.1. Co-products.

The production of Pemsa's steel cable trays systems generate scrap metal as a co-product, destined for sale to third parties

| | Stainless steel cable tray systems |
|---------------------------|------------------------------------|
| Scrap – kg/ declared unit | 2,26E+01 |

6.2. Emissions to indoor air.

The manufacturer declares that the cable trays systems studied do not generate emissions into the indoor air during their service life.

6.3. Release to soil and water.

The manufacturer declares that the cable trays systems studied do not generate emissions to the ground or water during their useful life.

6.4. Electric mix used

The electricity mix used for the characterisation of electricity for the year 2023 is that of the marketing company, obtained from the annual report of the National Commission on Markets and Competition (GWP: 259 gCO_{2e}/kWh).

References

[1] EN 15804:2012+A2:2020. Sustainability in construction. Environmental product declarations. Basic product category rules for building products.

[2] General Rules of the GlobalEPD Program, 2nd revision. AENOR. February 2016.

[3] ISO 14025:2010 standard. Environmental labels and declarations. Type III environmental declarations. Principles and procedures. (ISO 14025:2006).

[4] ISO 14040:2006/A1:2021 Standard. Environmental Management. Life Cycle Analysis. Principles and frame of reference. Modification 1. (ISO 14040:2006/Amd 1:2020).

[5] ISO 14044:2006/A1:2021 standard. Environmental Management. Life cycle assessment. Requirements and guidelines. Modification 2. (ISO 14044:2006/Amd 2:2020).

[6] Report of the Life Cycle Assessment for the EPDs of the cable trays of Pemsa Cable Management S.A. Written by Abaleo S.L., January 2024. Version 2.

[7] Impact assessment databases and methodologies applied through SimaPro 9.6.0.1

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