

# Environmental Product Declaration



In accordance with ISO 14025 and EN 15804:2012+A2:2022 for:

## Building Steel Profiles made of XCarb® Recycled and Renewably Produced Steel

from



Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB
EPD registration number:	S-P-09884
Publication date:	2023.07.27
Valid until:	2028.07.24

*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](http://www.environdec.com)*



## General information

### Programme information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
<b>Website:</b>	<a href="http://www.environdec.com">www.environdec.com</a>
<b>E-mail:</b>	<a href="mailto:info@environdec.com">info@environdec.com</a>

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): <i>PCR 2019:14 Construction products, version 1.11 Published on 2021.02.05, valid until: 2024.12.20.</i>
PCR review was conducted by: Claudia A. Peña. The review panel may be contacted by <a href="mailto:info@environdec.com">info@environdec.com</a>
Independent third-party verification of the declaration and data, according to ISO 14025:2006:  <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier: TECNALIA R&I Certificación S.L. Auditor: Cristina Gazulla Santos Accredited by: ENAC. Accreditation no. 125/C-PR283
Procedure for follow-up of data during EPD validity involves third party verifier:  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD:

EUROPERFIL, S.A.

Polígono Industrial de Cervera. Avda. Vall d'Aran, s/n

25200 Cervera (Lleida) España

Contact: Moises Alvarez Rodriguez; [moises.alvarez@europafil.com](mailto:moises.alvarez@europafil.com).

Description of the organisation: EUROPERFIL S.A. is dedicated to the manufacture of profiles, steel sandwich panels and innovative constructive solutions of metal closure for any type of building.

Product-related or management system-related certifications: ISO 14001 and ISO 9001

Name and location of production site(s):

- Name: Europerfil S.A.
- Location: Polígono Industrial de Cervera. Avda. Vall d'Aran, s/n 25200 Cervera (Lleida), España

## Product information

Product name: Steel sheet family of products.

Product identification: This EPD covers the average product of the family of building sheet profiles made of XCarb® Recycled and Renewably Produced Steel and produced by EUROPERFIL S.A. at its production site, located in Cervera (Lleida). Out of 36 different references, a representative product was analysed in order to obtain a virtual average product. The results of the life cycle assessment (LCA) will be presented for the average virtual product. In the following table, the references that have been included in this EPD are shown:

REFERENCES		
EUROFORM 23	ATENEA	EUROLINE 300
EUROFORM 34	HAIRCOL 59	KEFREN 3.1
EUROBASE 40	EUROCOL 60	KEFREN 3.2
EUROCOVER 34N	EUROMODUL 44	EUROLINE 250
EUROCOVER 40N	KORONA 60	GIZA 400
EUROBASE 48	EUROBASE 67	MEDEA
MINIONDA	EUROBASE 106	EUROLINE 200
CRETA Liso	EUROBAC 80	EUROLINE 150
CRETA Micronervado	EUROLINE-N300	EUROLINE 100
EGEO	EUROLINE-N400	AXIOS
EUROBASE 56	EUROBAC 150	EURODESIGN 345-51
KEOPS	EUROLINE 12	EURODESIGN 470-51

Product description: The average product from which the results of this study have been extracted, has been calculated based on a set of references (which are certified with CE (EN 14782)), including self-supporting steel metal sheets intended as exterior cladding of simple façade or sandwich, which can be installed in a vertical or horizontal position.

All references are cold formed profiles specially designed for use as a roofing, external & internal wall cladding, floors decking, composite floor and/or for support permanent formwork. The final product (i.e. metallic layer plus organic coating and forming shape) varies according to the intended end use of the products.

The representative product of the family of certified Xcarb® Recycled and Renewably Produced steel sheets has been obtained from the calculation of the average product weighted by production of all the references of galvanized and pre-lacquered steel, during the year of study in the center of EUROPERFIL S.A.

UN CPC code: CPC 412 Products of iron or steel.

Geographical scope: Global.

Products under study are produced in Cervera (Spain) but can be used at a global scale.

## **LCA information**

Declared unit: one square meter (m<sup>2</sup>) of sheet certified Xcarb® Recycled and Renewably Produced steel with a thickness of 0,70 mm. For the calculation of the declared unit, an application of 7,30 kg/m<sup>2</sup> has been considered for each of the references included in this study.

Reference service life: Not applicable.

Time representativeness: All specific data related to the production plants and used for the study date from 2021.

Database(s) and LCA software used: The primary inventory data has been obtained from EUROPERFIL S.A. corresponding to the 36 references produced in the manufacturing site of EUROPERFIL S.A. for the year 2021.

The secondary data has been extracted from the generic Ecoinvent version 3.8 database, included in the SimaPro v9.3.0.2.1 software and internationally recognized. Wherever possible, inventory data relating to the specific study countries, or in its absence from Europe in general, has been selected. These have been used for the stage of production and transport of raw materials, as well as for electricity generation or waste management processes, over which the manufacturer has no direct influence.

Description of system boundaries: Cradle to gate with modules C1–C4 and module D, (A1–A3 + C + D) has been chosen. Therefore, this EPD report considers the scope “cradle to gate with end of life of the product”, covering the modules of extraction and processing of raw materials (A1), their transportation to the production plant (A2), the average sheet steel family product manufacturing process (A3), end of life (C1–C4) and potential benefits and loads from the reuse and recycling of the foam glass aggregate at its end of life (D).

As permitted by PCR 2019:14 (version 1.11), remaining life cycle stages (modules A4–A5 and B1–B7) have been excluded from the study as not being relevant for this product.

Therefore, since the steel can be identified and separated at its end of life, the end of life of the product and possible benefits from material recovery of the EUROPERFIL S.A. product shall be included in the EPD (i.e., modules C1–C4 and D).

For an EPD of type “a) cradle to gate with modules C1–C4 and module D (A1–A3 + C + D)”, the PCR 2019:14 requires that a declared unit must be used, and the inclusion of reference service life is optional.

Applicable lifecycle stages with the system boundaries and processes are described below.

### • Product stage (A1–A3):

- Raw material supply (A1): This module considers the extraction and processing of raw materials used for the manufacture of the product. Moreover, raw materials’ packaging enabling transportation to the production plant is included. Likewise, the production of the energy necessary for the manufacturing process (electricity, diesel, and other fuels) is also considered.

- Transport of the raw materials (A2): This module consists of the transportation of all raw materials covered by module A1, from the extraction, production, and treatment site to the factory, considering the specific distances of each material supplier.
  - Manufacturing of steel sheet (A3): This module refers to the production process of the average product in the production plant. It includes the combustion of fuels (diesel) and the water consumed during the manufacturing process. It also considers the waste generated from the production process: the treatment and transport from the production plant to the waste manager. Finally, it considers the packaging used for distribution: the production of the primary and secondary packaging of the product (LDPE film, wood slats and LDPE stretch film), and the transport of this packaging from suppliers to the EUROPERFIL S.A. factory.
- End of life stage (C):
- Deconstruction or demolition (C1): This module considers the impacts of deconstruction process. In that case has been neglected as it is a minor impact compared to the building demolition.
  - Transport to the waste processing site (C2): This module considers a default distance of 50 km between the building where the product was installed and the waste manager facility.
  - Waste processing (C3): This module includes the reconditioning of aggregate steel sheet waste for recycling. The 95% of the steel is considered for recycling.
  - Disposal (C4): This module includes the final discharge of waste that has not been destined for recovery or treatment processes.

Considerations about the end of life of the representative average product:

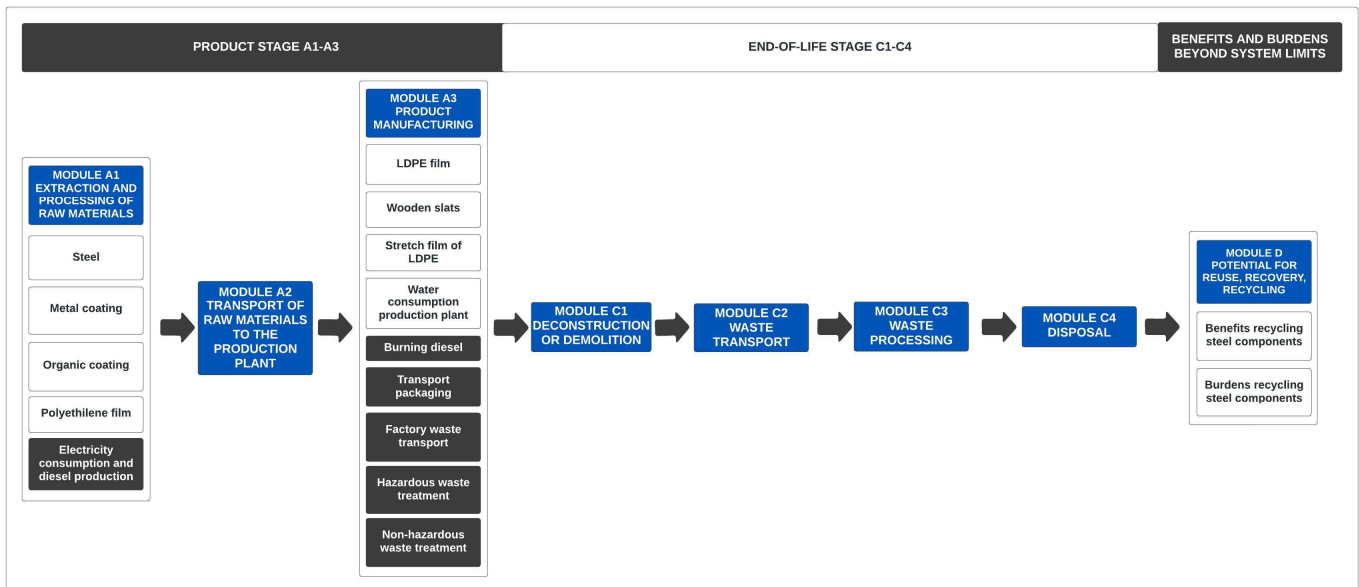
Parameter	Units per Declared Unit (m2)	Value
Waste collection process, specified by type	kg collected separately	7,30
	kg collected mixed with demolition waste	0,00
Recovery process, steel waste	kg for reuse	0,00
	kg for recycling	6,77
	kg for energy recovery	0,00
Recovery process, other materials	kg for reuse	0,00
	kg for recycling	0,00
	kg for energy recovery	0,00
Waste disposal	kg to landfill	0,53
Considerations for scenarios development	Distance to waste manager (km)	50,0

The module collects the most likely scenarios based on the best knowledge currently available.

- Benefits and loads beyond the system boundary (D): This module analyses the benefits and burdens related to the processes of recovery, reuse or recycling of waste from the product under study at their end of life, which could form part of the life cycle of a new product.



### System diagram:



### More information:

Company website for more information: <https://www.euoperfil.com/>

Name and contact information of LCA practitioner:

Lavola – Anthesis Group  
Rambla de Catalunya, 6, planta 2, 08007 Barcelona  
+34 938 515 055  
[www.anthesisgroup.com](http://www.anthesisgroup.com)

### Cut-off rules:

In accordance with the provisions of the PCR 2019:14 construction products, version 1.11 and the standard UNE-EN 15804:2012+A2:2020, at least 95% of total inflows and outflows (mass and energy) per module have been included.

The "polluter pays" principle has been applied.

In addition, the following processes have not been included in the scope of the study:

- Manufacture of equipment used in production, buildings, or any other assets.
- Business trips.
- Maintenance activities at the production plants and research and development.
- Transportation of personnel to and within the plants.
- Diffuse particle emissions during the transport and storage of raw materials.

### Hypotheses and considerations applied:

The hypotheses assumed during the study are detailed below:

- The certified Xcarb® Recycled and Renewably Produced steel used as raw material is obtained from steel scrap 90,9% "post-consumer". The remaining 9,1% of the steel is primary.
- All specific data used in the present study corresponds to 2021.
- The organic pre-lacquering layer cannot be separated after the shelf steel life of the product. Therefore, it has been applied to the total weight of the product the end-of-life scenario of steel.
- The final product on which the study has been based corresponds to an average virtual product containing a total of 36 references with two different covers: galvanized product (20 references produced in 2021) and pre-lacquered product (30 references produced in 2021). For the calculation of this average product, the 50 references that make up both products have been taken into account, from which an average value has been estimated for both. Then, from the two

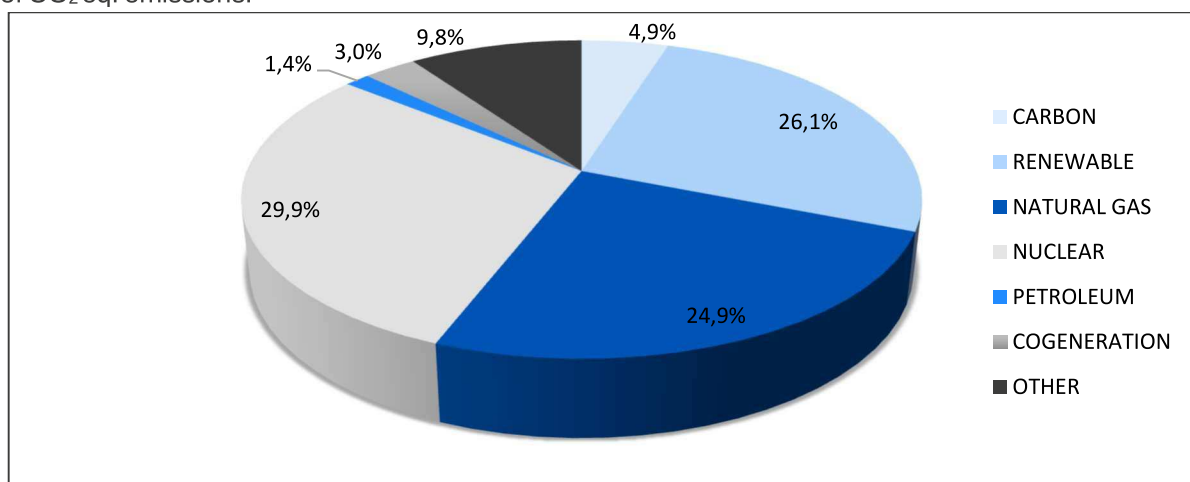
average values (galvanized and pre-lacquered) it has been possible to calculate the average virtual product of the family of steel sheet metal.

- An electrical mix corresponding to the company's consumption has been modeled according to the data of its energy supplier, assigning the impact value to each resulting kWh.
- It has been assumed that all truck transport complies with the EURO 5 emission standard, when carried out within European territory.
- As specified in ANNEX C of the Single Market for Green Products - The Product Environmental Footprint Pilots - Environment - European Commission (europa.eu), an end-of-life situation has been assumed for steel of 95% for the recycling process, and for the remaining 5%, it has been considered destined for landfill since the steel cannot be incinerated.
- 50 km distance has been assumed for the transport of waste from product deinstallation point to the waste manager's plant.
- Average production losses of 0.5% derived from the production process of the product have been considered. These have been applied as input to the consumption of raw materials and their transport to the production plant.
- Both for electricity consumption, as for the rest of the plant consumption, as well as for the generation of waste, an allocation of loads per mass per kg of steel sheet metal produced has been made.
- Regarding the transport of raw materials (module A2), specific distances have been introduced by supplier and material, which have been weighted based on the composition resulting from the average virtual product.
- For the transport of waste from the production plant to the waste manager, specific distances have been introduced to each waste manager based on waste type.
- In order to calculate the impacts of the steel in the module A1, the impacts in the published and certified according to ISO 14025 and EN 15804-A2 of the material "XCarb® recycled and renewably produced organic coated steel coils Granite® and Estetic®" have been considered.

#### Additional information:

Since the average electricity consumption of the production plants exceeds the threshold of 30% of the total energy consumption of product stage A1-A3, the resulting electricity mix considered for the study is shown below, divided by its energy sources, as required in the UNE EN 15804:2012+A2 (2020) standard and the *PCR 2019:14 Construction products, version 1.11 Published on 2021.02.05, valid until: 2024.12.20.*

In relation to its contribution to the environmental impacts of the product, the production of 1 kWh of electricity consumed by the average production plant of EUROPERFIL S.A. in 2021 generated 0,203 kg of CO<sub>2</sub> eq. emissions.



#### Data quality requirements:

In this study, data quality requirements established by ISO 14025 standards and reference PCRs “PCR 2019:14 Construction products, version 1.11 Published on 2021.02.05, valid until: 2024.12.20 and UNE-EN 15804:2012+A2:2020 have been applied.

Data has been evaluated through a data quality matrix based on the Product Environmental Footprint Category rules criterion for the data quality management, as it is established in the UNE-EN 15804:2012+A2. As a result of the data quality matrix, it is quantified that the gathered data achieves a medium-good level of quality (3.77 out of 5) in a range of very poor (1), poor (2), medium (3), good (4) and very good (5).

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

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	x	x	x	ND	ND	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x
Geography	EU	EU	ES	ND	ND	ND	ND	ND	ND	ND	ND	ND	EU	EU	EU	EU	EU
Specific data used	>95% For modules A1-A3 it comes from specific LCI data					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products*	From -40,6% until 76,9% regards the average product.					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	All products are produced at the same plant					-	-	-	-	-	-	-	-	-	-	-	-

\*Variation calculated for 1 m<sup>2</sup> of each reference considering its corresponding application (kg/m<sup>2</sup>) value.



## Content information

Product components	Weight (%)	Post-consumer material, weight (%)	Renewable material, weight-%
STEEL	97,62	90,9%	0
METAL COATING	1,80	0	0
ORGANIC COATING	0,59	0	0
POLYETHYLENE FILM	0,00015	0	0
<b>TOTAL</b>	<b>1 kg</b>	<b>0,909 kg</b>	<b>0 kg</b>
Packaging materials	Weight (%)	Post-consumer material, weight (%)	Renewable material, weight-%
LDPE FILM	0,32	0	0
WOODEN SLATS	0,82	0	100
STRETCH FILM OF LDPE	0,06	0	0
<b>TOTAL</b>	<b>1,2E-02 kg</b>	<b>0 kg</b>	<b>8,2E-03 kg</b>

None of the components present in the final product are included in the "Candidate List of Substances of Extreme Concern in the authorization procedure" of the REACH regulation.

## Environmental Information

The environmental information related to the analysed products has been calculated with the SimaPro software version 9.3.0.2.1. As required by PCR 2019:14, construction products version 1.11, the characterization factors indicated in Annex C of the EN 15804:2012+A2 standard have been used to estimate the potential environmental impacts (method EN 15804 + A2 Method V1.02 / EF 3.0 normalization and weighting set). With respect to the results corresponding to the rest of the parameters under study, the following methodologies have been used: EDIP to calculate waste production, CED (Cumulative Energy Demand) to calculate energy use and inventory data for output flows.

The environmental results corresponding to the life cycle of the representative average product of EUROPERFIL S.A. of the sheet steel family are shown below. These are divided by modules, covering the stages defined above in the system boundary section (A1-A3+C1-C4+D), and considering all the impact categories required by the PCR 2019:14 Construction products, version 1.11.

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceedances of assessed thresholds, safety margins, or risks.

## Results

Considering a declared unit of one square meter (m<sup>2</sup>) of sheet steel with a thickness of 0,70 mm and application factor of 7,30 Kg/m<sup>2</sup>.

### Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit										
Indicator	Unit	A1	A2	A3	TOTAL A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	7,84E+00	1,22E+00	2,22E-01	9,28E+00	0,00E+00	5,04E-02	0,00E+00	2,76E-03	-7,72E-01
GWP-biogenic	kg CO <sub>2</sub> eq.	3,95E-03	7,13E-05	2,10E-04	4,23E-03	0,00E+00	2,95E-06	0,00E+00	3,73E-07	9,95E-04
GWP-luluc	kg CO <sub>2</sub> eq.	2,79E-03	9,86E-06	1,94E-04	3,00E-03	0,00E+00	4,08E-07	0,00E+00	9,41E-08	3,47E-04
GWP-total	kg CO <sub>2</sub> eq.	7,85E+00	1,22E+00	2,22E-01	9,29E+00	0,00E+00	5,04E-02	0,00E+00	2,76E-03	-7,70E-01
ODP	kg CFC 11 eq.	7,37E-08	2,90E-07	3,30E-08	3,96E-07	0,00E+00	1,20E-08	0,00E+00	5,74E-10	-2,12E-08
AP	mol H <sup>+</sup> eq.	2,68E-02	4,24E-03	1,78E-03	3,28E-02	0,00E+00	1,75E-04	0,00E+00	2,85E-05	-2,84E-03
EP-freshwater	kg P eq.	3,75E-05	6,24E-07	3,40E-06	4,15E-05	0,00E+00	2,58E-08	0,00E+00	9,81E-09	-1,05E-05
EP-marine	kg N eq.	5,57E-03	1,36E-03	7,06E-04	7,63E-03	0,00E+00	5,61E-05	0,00E+00	1,24E-05	-1,80E-04
EP-terrestrial	mol N eq.	7,04E-02	1,49E-02	7,73E-03	9,30E-02	0,00E+00	6,17E-04	0,00E+00	1,36E-04	-7,21E-03
POCP	kg NMVOC eq.	1,78E-02	4,07E-03	2,27E-03	2,41E-02	0,00E+00	1,68E-04	0,00E+00	3,78E-05	-4,15E-03
ADP-minerals & metals*	kg Sb eq.	1,56E-03	5,30E-08	1,95E-08	1,56E-03	0,00E+00	2,19E-09	0,00E+00	1,33E-10	-1,56E-05
ADP-fossil*	MJ	1,09E+02	1,73E+01	4,23E+00	1,31E+02	0,00E+00	7,14E-01	0,00E+00	3,68E-02	-6,36E+00
WDP*	m <sup>3</sup>	1,86E+00	-2,89E-03	6,50E-02	1,92E+00	0,00E+00	-1,19E-04	0,00E+00	1,49E-05	1,48E-01
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.

### Potential environmental impact – additional mandatory and voluntary indicators

Indicator	Unit	A1	A2	A3	TOTAL A1-A3	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	7,83E+00	1,21E+00	2,18E-01	9,26E+00	0,00E+00	5,01E-02	0,00E+00	2,72E-03	-7,25E-01

Voluntary additional indicators have not been declared.

<sup>1</sup> The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013. For the certified Xcarb® Recycled and Renewably Produced steel the GWP-total but excluding GWP-biogenic has been used, due to lack of data. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

## Use of resources

Results per declared unit										
Indicator	Unit	A1	A2	A3	TOTAL A1-A3	C1	C2	C3	C4	D
PERE	MJ	1,49E+02	2,65E-02	9,88E-01	1,50E+02	0,00E+00	1,10E-03	0,00E+00	1,54E-04	-5,90E-01
PERM	MJ	0,00E+00	0,00E+00	1,09E+00	1,09E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,49E+02	2,65E-02	2,08E+00	1,51E+02	0,00E+00	1,10E-03	0,00E+00	1,54E-04	-5,90E-01
PENRE	MJ	1,09E+02	1,83E+01	3,31E+00	1,30E+02	0,00E+00	7,59E-01	0,00E+00	3,91E-02	-6,69E+00
PENRM	MJ.	1,90E+00	0,00E+00	1,21E+00	3,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,11E+02	1,83E+01	4,52E+00	1,33E+02	0,00E+00	7,59E-01	0,00E+00	3,91E-02	-6,69E+00
SM	kg	6,51E+00	0,00E+00	0,00E+00	6,51E+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	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	0,00E+00	0,00E+00
FW	m <sup>3</sup>	4,56E-02	4,74E-05	1,55E-03	4,72E-02	0,00E+00	1,96E-06	0,00E+00	7,87E-07	6,05E-03
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 production and output flows

### Waste production

Results per declared unit										
Indicator	Unit	A1	A2	A3	TOTAL A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	6,07E-05	4,54E-05	5,40E-06	1,12E-04	0,00E+00	1,88E-06	0,00E+00	9,28E-08	-9,17E-05
Non-hazardous waste disposed	kg	1,83E-01	9,07E-04	2,81E-03	1,87E-01	0,00E+00	3,75E-05	0,00E+00	1,09E+00	-2,32E-01
Radioactive waste disposed	kg	3,97E-03	1,24E-04	1,58E-05	4,11E-03	0,00E+00	5,11E-06	0,00E+00	2,54E-07	3,36E-06

### Output flows

Results per declared unit										
Indicator	Unit	A1	A2	A3	TOTAL A1-A3	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	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	3,95E-02	3,95E-02	0,00E+00	0,00E+00	6,79E+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	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	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	0,00E+00	0,00E+00

## Results' interpretation

Modules A1, A2 and A3 present a higher contribution in the total impacts with respect to all the modules of the life cycle of the average product of the family of certified Xcarb® Recycled and Renewably Produced steel products. Considering all indicators evaluated, it has a maximum value in the category of depletion of mineral resources, 99.99%.

Module C1 has been considered negligible, so there are no associated impacts.

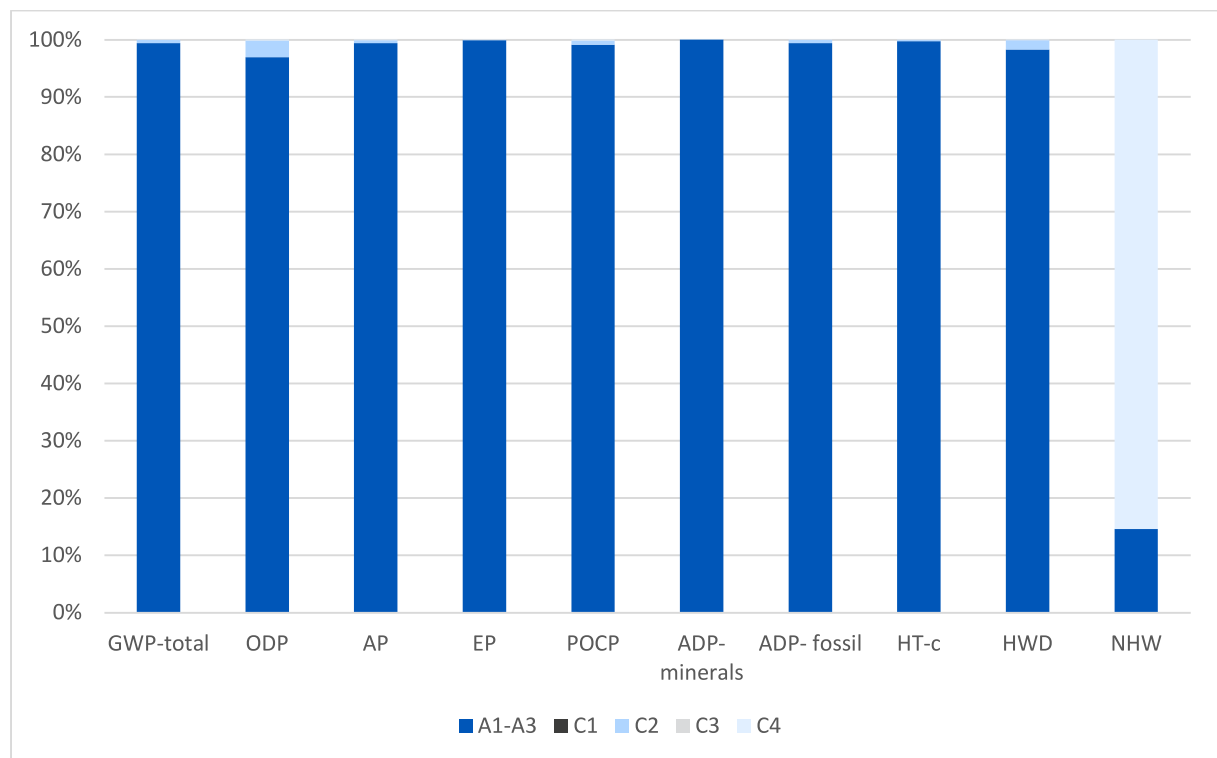
Module C2 has a very low contribution in the impact categories assessed. Specifically, it has its maximum value in the impact category of de ozone layer depletion, which reaches a value of 2,93%.

In module C3, the impacts of recycling are not imputed, since applying the polluter pays principle, these are imputed in the following system.

Module C4 presents a low contribution in most of the impact categories evaluated except for the non-hazardous waste production category, where it reaches a value of 85% of the total impact category.

Finally, module D presents a maximum reduction value in the abiotic depletion potential for fossil resources (-6,36E+00 MJ/m<sup>2</sup> of product) followed by the category of production of global warming potential for fossil fuels that reaches a value of -7,72E-01 kg CO<sub>2</sub> eq./m<sup>2</sup> of product.

In the following table, a graphic of the contribution of the different stages over the considered impact categories is shown.



### Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	Not declared*

*Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.*

\*As the mass of the packaging is under 5% of the product mass, the amount of biogenic carbon contained in the packaging is not represented, according to UNE-EN 15804:2012+A2:2020.



## References

- The Product Category Rules (PCR) “PCR 2019:14 Construction products, version 1.11 published on 5 February 2021, valid until 20 December 2024” based on the European standard UNE-EN 15804:2012+A2:2020.
- UNE-EN ISO 14040:2006 – Environmental management – Life Cycle Assessment – Principles and framework
- UNE-EN ISO 14044:2006 – Environmental management – Life Cycle Assessment – Requirements
- UNE-EN ISO 14025:2006- Labels and environmental declarations.
- ISO/TR 14047: 2003 – Environmental management – Life Cycle Assessment – LCI application examples
- ISO/TS 14048: 2003 – Environmental management – Life Cycle Assessment – Data inventory
- ISO/TR 14049: 2000 – Environmental management – Life Cycle Assessment – Examples of application of objectives and scope and inventory analysis
- UNE-EN 15804:2012+A2: Sustainability in construction. Product environmental statements. Commodity category rules for construction products.
- Environmental Product Declaration number EPD-ARC-20220319-CBA1-EN. XCarb® recycled and renewably produced organic coated steel coils Granite® and Estetic®. ArcelorMittal.

## VERIFICATION STATEMENT CERTIFICATE CERTIFICADO DE DECLARACIÓN DE VERIFICACIÓN

*Certificate No. / Certificado nº: EPD08003*

TECNALIA R&I CERTIFICACION S.L., confirms that independent third-party verification has been conducted of the Environmental Product Declaration (EPD) on behalf of:

TECNALIA R&I CERTIFICACION S.L., confirma que se ha realizado verificación de tercera parte independiente de la Declaración Ambiental de Producto (DAP) en nombre de:

**EUROPERFIL, S.A.**  
**Avda. Vall d'Aran, s/n**  
**Polígono Industrial de Cervera**  
**25200 CERVERA (Lleida) - SPAIN**

for the following product(s):  
*para el siguiente(s) producto(s):*

**Building Steel Profiles made of XCarb® Recycled and Renewably Produced Steel.**  
***Chapas metálicas autoportantes para edificación fabricadas en acero XCarb® reciclado y producido con energía renovable.***

with registration number **S-P-09884** in the International EPD® System ([www.environdec.com](http://www.environdec.com)).  
*con número de registro **S-P-09884** en el Sistema Internacional EPD® ([www.environdec.com](http://www.environdec.com)).*

it's in conformity with:  
*es conforme con:*

- **ISO 14025:2010 Environmental labels and declarations. Type III environmental declarations.**
- **General Programme Instructions for the International EPD® System v.3.01**
- **PCR 2019:14 Construction products (EN 15804:A2) v.1.11**
- **UN CPC 412 Products of iron or steel**



Carlos Nazabal Alsua  
Manager

Issued date / Fecha de entrada en vigor:	27/07/2023
Update date / Fecha de actualización:	27/07/2023
Valid until / Válido hasta:	24/07/2028
Serial Nº / Nº Serie:	EPD0800300-E

This certificate is not valid without its related EPD.  
Este certificado no es válido sin su correspondiente EPD.

El presente certificado está sujeto a modificaciones, suspensiones temporales y retiradas por TECNALIA R&I CERTIFICACION.  
This certificate is subject to modifications, temporary suspensions and withdrawals by TECNALIA R&I CERTIFICACION.

El estado de vigencia del certificado puede confirmarse mediante consulta en [www.tecnaliacertificacion.com](http://www.tecnaliacertificacion.com).  
The validity of this certificate can be checked through consultation in [www.tecnaliacertificacion.com](http://www.tecnaliacertificacion.com).



