ENVIRONMENTAL PRODUCT DECLARATION

CATIFA (RE) 46

EPD Program: International EPD System (www.environdec.com)
Programme operator: EPD International AB
Date of emission: 2026-06-30
Validity date: 2031-06-26
Revision date: 2026-07-06
Registration number: EPD-IES-0032536:002

EPD of multiple products (Catifa (RE) 46: PR00101, PR00102, PR00103, PR00104, PR00105, PR00106, PR00107, PR00108; four-leg version and swivel trestle base version) based on a representative product: Catifa (RE) 46 PR00101 four leg chromed.

Note: an EPD should provide current information, and may be updated or depublished if conditions change. To fin the latest version of the EPD and to confirm its validity, see www.environdec.com

Environmental Product Declaration in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021

arper

PROGRAMME INFORMATION

Programme:	International EPD System
Address of programme operator:	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com
Accountabilities for PCR, LCA and independent, third-party verification	
Product Category Rules (PCR)	
CEN standard EN 15804 serve as the core Product Category Rules (PCR)	
PCR 2019:14 v2.0.1 – Construction products c-PCR-021 Furniture (c-PCR to PCR 2019:14) Catifa (RE) 46, EPD-IES-0032536:002, UN CPC 3811 (seats). PCR review was conducted by: The Technical Committee of International EPD System. A full list of members is available on www.environdec.com. The review panel may be contacted via support@environdec.com. Review chair: Rob Rouwette (chair), Noa Meron (co-chair).	
Life cycle assessment (LCA)	
LCA accountability: 2B Srl	
Third-party verification	
External and independent ("third-party") verification of the declaration and data, according to ISO 14025:2006, via EPD verification through: ☑ EPD verification by EPD Process Certification* Third party verifier: CSQA Certificazioni Srl, is an approved certification body responsible for third-party verification Third-party verifier is accredited by: ACCREDIA (00070) *For EPD Process Certification, an accredited certification body certifies and reviews the management process and verifies EPDs published on a regular basis. For details about third-party verification procedure of the EPDs, see the GPI.	
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 may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same version number up to the first two digits20) 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 characterization factors); have equivalent content declarations; and be valid at the time of comparison.

THE COMPANY AND THE PRODUCT

INFORMATION ABOUT EPD OWNER

The Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD) have been produced by Arper in collaboration with 2B Srl (www.to-be.it). The company references are:

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THE COMPANY

Arper manufactures chairs, tables and furnishing accessories. Arper's approach is relationship-oriented, and translates into design aimed at aesthetics and usability; into a global, innovative and customized approach; into the enhancement of local contexts within internationalization strategies; into organizational policies always based on transparency and the maintenance of a solid and consistent brand identity.

Arper is working on quantifying the environmental impact of some of its products in order to stimulate research to improve their technical and environmental performance and to concretize its commitment to respect the environment. Arper has already obtained EPD certification for some of its products and wishes to obtain it for all the most representative models of its production.

Arper recognizes the importance of environmental sustainability and is increasingly committed to it: in 2006 it adopted the ISO 14001 environmental management system, in 2007 it introduced the use of the LCA tool and subsequently obtained various product certifications. Through LCA, it was possible for Arper to obtain the EPD. Arper obtained the first EPD for Catifa 46 and Catifa 53 in 2008. In 2018, Arper obtained the EPD process.

Arper's production sites are located in Italy and the USA.

PRODUCT DESCRIPTION

Product name: Catifa (RE) 46; Product identification according to the UN CPC scheme: 3811 (Seats)

Catifa 46 is a timeless icon, a distinctive design that, since its debut, has redefined the language of design with elegance and versatility. With Catifa (RE) 46, the collection has undergone its most significant renewal, starting from a contemporary reinterpretation of materials: the shell is made of recycled plastic, obtained from a combination of post-consumer and post-industrial material.

Catifa (RE) 46 is characterized by a thin and refined edge that shapes its fluid profile. An essential feature that enhances its lightness and balance, an authentic expression of a suspended form, open to new possibilities.

Designed for indoor applications, Catifa (RE) 46 is a seating system composed of a shell in recycled polypropylene and a metal base available in two product configurations: article 0501 with a four-leg structure and article 0512 with a swivel trestle base.

The four-leg version is available with either a chromed or powder-coated finish, while the swivel trestle base version is available with aluminium or powder-coated finishes. The shell is offered in eight different colours: PR00101, PR00102, PR00103, PR00104, PR00105, PR00106, PR00107, PR00108.

The product system allows full combination between base type, structural finish, and shell colour.

This EPD covers a multiple-product system including both configurations. The study reports the composition and results referring to the representative product of the system. Catifa (RE) 46 in colour PR00101 with chromed base has been selected as the representative product, as it is the best-selling variant in the reference year.

Catifa (RE) 46 is manufactured in Italy and marketed globally by Arper in two packaging configurations: single unit packaging and multi-unit packaging containing four chairs per box.

Packaging ratios have been determined based on sales data for the reference year of the study (2025). In particular, 89% of the chairs are packed in boxes containing four units.

Catifa (RE) 46 does not contain any Substances of Very High Concern (SVHC) listed by the European Chemicals Agency (ECHA) in concentrations above 0.1% (w/w).

Table 1 provides information on the composition of the representative product, consisting of a recycled polypropylene shell and steel legs, as well as its packaging.

Table 1– Representative product composition for the Catifa (RE) 46 product group and its packaging, with relative recycled material and biogenic carbon content.

	PRODUCT COMPOSITION CATIFA (RE) 46						PRODUCTS RANGE	
Material	Weight (kg)	Weight (%)	Pre-consumer recycled material (kg)	Post-consumer recycled material (kg)	Biogenic carbon content (kg)	Biogenic carbon content (%)	Weight range (kg)	Biogenic carbon content range (kg)
Coating	0.016	0.318	-	-	-	-	0.016-0.057	-
PE	0.008	0.158	-	-	-	-	0.001-0.011	-
PP	2.605	51.727	1.140	0.614	-	-	2.605-2.620	-
PUR	0.035	0.695	-	-	-	-	0.035	-
Steel	2.372	47.102	-	-	-	-	2.372-2.935	-
Aluminium	-	-	-	-	-	-	2.389	-
Total	**5.036**	**100.000**	**1.140**	**0.614**	**-**	**-**	**5.036-8.021**	**-**
PACKAGING COMPOSITION								
Material	Weight (kg)	Weight (%)	Post-consumer recycled material (%)	Biogenic carbon content (kg)	Biogenic carbon content (%)		Weight range (kg)	Biogenic carbon content range (kg)
Paper	0.014	1.020	-	0.003	21.428		0.014-0.024	0.003-0.006
Cardboard	1.329	96.866	0.583	0.553	41.610		1.329-1.189	0.553-0.818
PE	0.024	1.749	0.011	-	-		0.024-0.189	-
Steel	0.005	0.365	-	-	-		0.005-0.116	-
Total packaging	**1.372**	**100.000**	**0.594**	**0.556**	**40.525**		**1.372-2.295**	**0.556-0.824**

*The quantities reported for the packaging were obtained from a weighted average between packaging x1 and x4 of Catifa (RE) 46.

ENVIRONMENTAL INFORMATION

DECLARED UNIT

The declared unit is represented by 1 seat with a lifetime of 15 years. Product lifetime corresponds to the time the seat maintains its function: in absence of statistical data, lifetime is assumed equal to the default value of 15 years.

SYSTEM BOUNDARIES

This EPD is a "cradle-to-grave and module D" declaration. The stages included in the study comprise the production of raw materials, components, and packaging materials; the assembly of the product and packaging; the transportation of raw materials and components; product storage; distribution; the use phase; and the end-of-life phase of the packaging and product. The study also includes module D, which indicates the benefits and loads of using recycled raw materials and recycling.

Specifically, the life cycle of Catifa (RE) 46 is divided into the following stages and information modules:

Table 2 – System boundaries, (ND non-declared modules).

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw materials	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	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Geography	GLO	GLO	IT	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	-

No cut-off rules were applied.

The difference between the declared GWP-GHG result and the product exhibiting the largest deviation for modules A1–A3 is +53.37%, associated with the product Catifa (RE) 46 coated trestle in the colour version PR00101.

The GWP-GHG intensity of the recycled cardboard used as packaging raw material is 1086.21 kg CO_2 eq./tonne.

The GWP-GHG intensity of the post-industrial polypropylene used as raw material for the shell is 1512 kg CO_2 eq./tonne

TIME BOUNDARIES

Primary data originate from Arper and refer to the reference year 2025. Secondary data originates from the ecoinvent v3.11 database (allocation, cut-off by classification) published in 2024, and from literature sources.

GEOGRAPHICAL BOUNDARIES

Components and packaging materials are produced in Italy. The product is sold both in Italy and abroad. The distribution and end-of-life scenario consider the sales figures of the reference year.

BOUNDARIES IN THE LIFE CYCLE

The following processes are excluded from the LCA: infrastructure, building of site, production of manufacturing equipment and personnel activities. For those LCA processes that already contained infrastructure, such as processes from the ecoinvent database, infrastructure has not been excluded.

The period for which the inputs and outputs from the product system is accounted is 100 years from the year that the LCA model best represents, considering the representativeness of the inventory data. Uptake and emissions of biogenic carbon are assessed both as total Global Warming Potential (GWP) (including GWP-fossil, GWP-biogenic and GWP-land transformation) and separately as GWP-biogenic. As required by PCR 2019:14 v2.0.1, an additional indicator (GWP-GHG) is included, this is identical to GWP-total except that the characterization factor for biogenic carbon dioxide is set to zero. The results of this analysis are comparable with other EPDs based on PCRs aligned with version 5.0 of the General Programme Instructions.

ALLOCATION RULES

As regards end-of-life allocation, the "cut-off" approach was adopted. Raw materials and production processes are included for virgin resources. No allocation is made for materials subject to recycling. The recycling process is included for input of recycled resources. Outputs subject to recycling are regarded as inputs to the next life cycle. For the energy and water consumption of the warehouse, volume allocation has been applied.

PROCESS FLOW DIAGRAMME

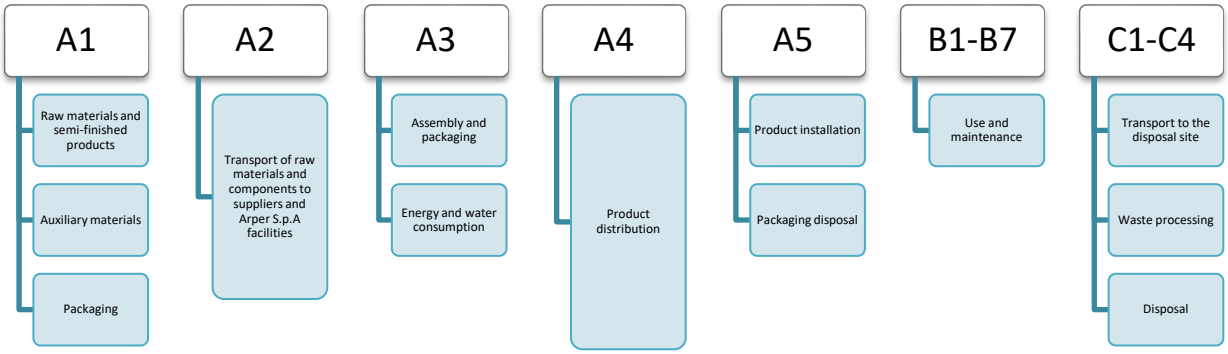

Figure 1- Process flow diagramme

INVENTORY ANALYSIS

The LCA of Catifa (RE) 46 is based on primary data for the fundamental aspects of the study, such as the weight of the packaging components and materials. Primary data have been collected from Arper's suppliers, while generic data originates from the ecoinvent database v3.11.

The LCA calculation has been performed using the LCA software SimaPro v10.2.

Data quality was assessed using a data quality matrix for processes contributing >5% to the main LCIA categories and through qualitative analysis for all other processes. The analysis indicates that the

overall data quality is good. A sensitivity analysis of proxy data was performed to verify that their impact on the main impact categories was less than 10%, as required by reference PCRs.

A data quality assessment was performed to estimate the share of primary data contributing to GWP-GHG results with a contribution for modules A1–A3. For the reference product, the total share of primary data for modules A1-A3 is 8.031%. The share of primary data of the GWP-GHG results for the generation of electricity process for modules A1-A3 is 8.018%, as reported in the table below.

Table 3 – Declaration of data sources, reference year, data category and share of primary data of GWP-GHG results for A1-A3.

Catifa (RE) 46					
Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Transport of raw materials	Collected data and database	EPD owner, ecoinvent v3.11	2024-2025	Primary and Secondary data	0.013%
Generation of Electricity	Collected data and database	EPD owner and ecoinvent v3.11	2024-2025	Primary and secondary data	8.018%
Other processes	Collected data and database	EPD owner and ecoinvent v3.11	2024-2025	Primary and secondary data	0.000%
Total share of primary data, of GWP-GHG results for A1-A3					8.031%

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

The methodology described in the manual about data collection and process EPD has been used for data collection and LCA calculations.

Primary material data was obtained from the supplier for the main components of the chair. The components for which primary data have been made available belong to the shell, the frame and the feet.

The shell is produced through an injection moulding process using recycled polypropylene. The metal structures forming the base are manufactured through cutting, forming, and welding processes, followed by surface finishing treatments, including powder coating or chroming for the four-leg version, and aluminium or powder coating finishing for the swivel trestle base version.

For electricity consumption in the production and storage phases (A1–A3), the national residual mix has been used, according to the ecoinvent v.3.11 database (Electricity, medium voltage {IT} | electricity, medium voltage, residual mix | Cut-off, S). This has been applied to the processing of metal components, finishing operations, and internal assembly and handling activities.

To produce the shell, a specific electricity mix based on 100% hydropower has been considered.

The GWP-GHG indicator value associated with electricity consumption is 0.68 kg CO_2 eq/kWh for the national residual mix and 0.012 kg CO_2 eq/kWh for the 100% hydropower mix.

For product storage (A1-A3), primary data provided by the company responsible for storing the shells and packaged structures was used. Consumption related to product storage was allocated on a volumetric basis, assuming that Arper products stored in the reference year occupy 80% of the warehouse volume in height and 60% in width. A storage period of three months was also assumed for the products.

In the distribution phase (A4), sales data were used, considering a road transport (ecoinvent database process: Transport, freight, lorry 16-32 metric ton, EURO5 {RER}) and the distance between Arper's headquarters and the capital city of the exporting country. In the case of transport by ship, land transport (Transport, freight, lorry 16-32 metric ton, EURO5 {RER}) is assumed to cover the distance from the port to the nearest Arper's facility and then transport by ship to the main port of the assessed foreign country. In addition, local transport of 300 km by road (Transport, freight, lorry 16-32 metric ton, EURO5 {RER}) is evaluated.

Google Maps and Econtransit were used to calculate the distances relating to distribution (A4), for transport by truck and ship respectively.

In the use phase, modules B1, B3, B4, B5, B6, and B7 are null as they are not applicable to this study.

For product maintenance (B2), consumption of 0.1 L of hot water and 0.8 g of soap per chair is assumed. For soap, a solution with 5% alkylbenzene sulfonate is considered. To heat the water, consumption of 5.58 MJ of thermal energy is assumed.

At the end of the product's life, module C1 is zero as it is not applicable to this study.

For the end-of-life transport stage of the product and packaging (C2), transport by truck is assumed (Transport, freight, lorry 16–32 metric ton, EURO5 {RER} and Transport, freight, lorry 16–32 metric ton, EURO5 {RoW}), with a distance of 80 km for fractions sent to incineration and 130 km for fractions sent to landfill and recycling.

Module C3 considered recycling processes and module C4 considered incineration and landfill processes. For the end-of-life scenario, national average data for the countries where the product is sold were used (OECD data for non-European countries and Eurostat data for European countries).

ASSESSMENT OF THE ENVIRONMENTAL IMPACT

The environmental performance of the products was assessed using the method defined by c-PCR-021 Furniture (c-PCR to PCR 2019:14), PCR 2019:14 v2.0.1 and EN 15804:2012+A2:2019/AC 2021.

The environmental impact indicators were taken from the February 2023 version of the EN 15804+A2 (adapted) methods, based on the EF 3.1 (July 2022) and AWARE 1.2c reference packages. The CED (LHV) method and PCR option A were used for the energy indicators. The EDIP 2003 method was used to calculate waste. LHV values and efficiencies from the ecoinvent 3.11 database were used to calculate output flows.

The following tables show the life cycle-related indicator results for the representative Catifa (RE) 46 product with recycled polypropylene shell and four chromed legs in PR00101 colour version. The indicators are broken down by the contribution of the various modules that make up the product life cycle. The study does not include secondary materials and fuels, components intended for reuse, or materials for energy recovery.

Table 4 – Reference product results for product Catifa (RE) 46 for mandatory indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq	1.37E+01	1.59E+00	8.47E-01	0.00E+00	4.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	5.43E-01	1.53E+00	-4.48E+00
GWP-fossil	kg CO_2 eq	1.40E+01	1.59E+00	1.04E-01	0.00E+00	4.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	3.46E-01	1.52E+00	-4.36E+00
GWP-biogenic	kg CO_2 eq	-1.99E+00	3.27E-04	2.39E+00	0.00E+00	5.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-05	1.39E-01	2.58E-05	-7.52E-02
GWP-luluc*	kg CO_2 eq	3.32E-02	5.83E-04	3.98E-05	0.00E+00	5.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-05	3.68E-04	1.33E-05	-1.30E-02
ODP	kg CFC11 eq	2.00E-07	3.24E-08	1.02E-09	0.00E+00	1.32E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-09	4.51E-09	4.59E-10	-1.03E-07
AP	mol H^+ eq	6.11E-02	1.15E-02	4.25E-04	0.00E+00	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-04	1.56E-03	2.67E-04	-1.84E-02
EP-freshwater*	kg P eq	5.76E-03	1.03E-04	1.01E-05	0.00E+00	1.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-06	9.65E-05	5.10E-06	-3.24E-03
EP-marine	kg N eq	1.37E-02	3.24E-03	3.88E-04	0.00E+00	1.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	6.95E-04	3.48E-04	-3.46E-03
EP-terrestrial	mol N eq	1.31E-01	3.57E-02	1.64E-03	0.00E+00	1.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-03	5.07E-03	1.32E-03	-2.87E-02
POCP	kg NMVOC eq	4.90E-02	1.19E-02	7.05E-04	0.00E+00	6.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-04	1.86E-03	3.66E-04	-8.79E-03
ADPE**	kg Sb eq	1.08E-04	4.78E-06	3.10E-07	0.00E+00	4.02E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-07	2.61E-06	4.94E-08	3.18E-06
ADPF**	MJ	1.92E+02	2.21E+01	8.95E-01	0.00E+00	6.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+00	4.53E+00	3.50E-01	-1.01E+02
WDP	m^3 depriv.	5.50E+00	8.13E-02	-2.20E-02	0.00E+00	1.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-03	6.77E-02	-5.36E-02	-7.32E-01
Acronyms		Climate change: GWP-total; Climate change - Fossil: GWP-fossil; Climate change - Biogenic: GWP-biogenic; Climate change - Land use and LU change: GWP-luluc; Ozone depletion: ODP; Acidification: AP; Eutrophication, freshwater: EP-freshwater; Eutrophication, marine: EP-marine; Eutrophication, terrestrial: EP-terrestrial; Photochemical ozone formation: POCP; Resource use, minerals and metals: ADPE; Resource use, fossils: ADPF; Water use (from AWARE): WDP														

*The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, non-cancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

**The results of this environmental impact indicator should be used with caution because of the uncertainties of these results or because experience with the indicator is limited. Using the results of modules A1-A3 without taking into account the results of module C is not recommended.

Table 5 - Reference product results for product Catifa (RE) 46 for additional indicators

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG	kg CO_2 eq	1.41E+01	1.59E+00	4.89E-01	0.00E+00	4.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	4.85E-01	1.52E+00	-4.45E+00
PM	disease inc.	9.32E-07	1.15E-07	8.27E-09	0.00E+00	2.05E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-09	7.18E-08	2.68E-09	-4.82E-08
IRP	kBq U-235 eq	7.85E-01	2.38E-02	2.82E-03	0.00E+00	4.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-03	1.45E-02	4.30E-04	-2.78E+00
ETP-fw	CTUe	1.02E+02	2.78E+00	8.04E+00	0.00E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-01	3.64E+00	5.16E-01	-4.45E+00
HTP-c*	CTUh	3.66E-08	2.80E-10	4.12E-11	0.00E+00	5.32E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-11	5.51E-10	3.88E-11	-6.70E-10
HTP-nc*	CTUh	2.25E-07	1.26E-08	2.31E-09	0.00E+00	7.38E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.46E-10	6.78E-09	1.93E-09	-2.30E-08
SQP	Pt	9.13E+01	1.15E+01	4.77E-01	0.00E+00	1.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-01	5.36E+00	4.72E-01	-2.39E+01
Acronyms	Climate change - GHG: GWP-GHG; Particulate matter: PM; Ionising radiation: IRP; Ecotoxicity, freshwater: ETP-fw; Human toxicity, cancer: HTP-c; Human toxicity, non-cancer: HTP-nc; Land use: SQP															

* 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.

** Disclaimer: This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities, Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Table 6 Reference product results for product Catifa (RE) 46 for use of resources

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.49E+01	3.21E-01	4.54E+00	0.00E+00	5.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-02	2.65E-01	7.07E-03	-2.30E+01
PERM	MJ	1.73E+01	0.00E+00	-1.73E+01	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	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	3.22E+01	3.21E-01	-1.27E+01	0.00E+00	5.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-02	2.65E-01	7.07E-03	-2.30E+01
PENRE	MJ	1.27E+02	2.21E+01	1.38E+00	0.00E+00	6.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+00	4.54E+00	2.63E+01	-1.01E+02
PENRM	MJ	6.23E+01	0.00E+00	-1.01E+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	0.00E+00	-5.27E+01	-3.41E+01	0.00E+00
PENRT	MJ	1.90E+02	2.21E+01	3.70E-01	0.00E+00	6.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+00	-4.81E+01	-7.82E+00	-1.01E+02
SM	kg	2.40E+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	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	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.57E-01	2.61E-03	-7.46E-04	0.00E+00	4.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-04	1.91E-03	-1.46E-03	-5.78E-02
Acronyms	Use of renewable primary energy excluding renewable primary energy resources used as raw material: PERE; Use of renewable primary energy resources used as raw material: PERM; Total use of renewable primary energy resources: PERT; Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw material: PENRE; Use of non-renewable primary energy resources used as raw material: PENRM; Total use of non-renewable primary energy resources: PENRT; Use of secondary material: SM; Use of renewable secondary fuels: RSF; Use of non-renewable secondary fuels: NRSF; Net use of fresh water: FW															

Table 7 - Reference product results for product Catifa (RE) 46 for waste production

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	3.27E-03	1.46E-04	6.37E-06	0.00E+00	3.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-05	4.31E-05	3.51E-06	7.36E-06
NHWD	kg	1.94E+00	9.16E-01	1.23E+00	0.00E+00	5.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-02	3.67E+00	8.38E-01	-2.28E-01
RWD	kg	1.99E-04	5.86E-06	7.08E-07	0.00E+00	1.05E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-07	3.65E-06	1.06E-07	-7.12E-04
Acronyms	Hazardous waste disposed: HWD; Non-hazardous waste disposed: NHWD; Radioactive waste disposed: RWD															

Table 8 - Reference product results for product Catifa (RE) 46 for output flows

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	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	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
MFR	kg	0.00E+00	0.00E+00	9.37E-01	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	3.47E+00	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	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
EEE	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acronyms	Components for re-use: CRU; Materials for recycling: MFR; Materials for energy recovery: MER; Exported energy - electricity: EEE; Exported energy - heat: EET															

ADDITIONAL LCA RESULTS

In accordance with the PCR, Table 9 and Table 10 present the variations in the main indicators resulting from differences in the life cycle modules included within the system boundaries between the declared reference product and the other products assessed. These variations are primarily attributable to the different materials used in the four-leg and trestle versions, particularly the aluminium used for the trestle

Table 9 – Additional LCA results, variations of analyzed product respect to the reference product

Indicator	Unit	Al-Trestle PR00101	Coated Trestle PR00101	Al-Trestle PR00102	Coated Trestle PR00102	Al-Trestle PR00103	Coated Trestle PR00103
GWP-total	kg CO_2 eq	46.7%	47.2%	46.5%	47.1%	46.6%	47.1%
GWP-fossil	kg CO_2 eq	47.0%	47.5%	46.8%	47.4%	46.9%	47.4%
GWP-biogenic	kg CO_2 eq	34.3%	34.3%	34.2%	34.3%	34.2%	34.3%
GWP-luluc	kg CO_2 eq	48.7%	49.0%	48.6%	49.0%	48.7%	49.0%
ODP	kg CFC11 eq	39.9%	40.9%	39.9%	41.0%	40.0%	41.1%
AP	mol H^+ eq	57.0%	57.2%	56.1%	56.4%	56.5%	56.8%
EP-freshwater	kg P eq	47.8%	48.2%	47.6%	48.0%	47.8%	48.1%
EP-marine	kg N eq	50.8%	51.2%	50.6%	51.0%	50.8%	51.1%
EP-terrestrial	mol N eq	52.3%	52.6%	52.1%	52.4%	52.2%	52.6%
POCP	kg NMVOC eq	48.8%	49.3%	48.6%	49.1%	48.7%	49.2%
ADPE	kg Sb eq	51.0%	51.3%	50.9%	51.2%	51.0%	51.4%
ADPF	MJ	45.1%	45.8%	45.2%	45.9%	45.0%	45.8%
WDP	m^3 depriv.	31.6%	32.4%	30.0%	30.8%	30.9%	31.7%

Table 10 – Additional LCA results, variations of analyzed product respect to the reference product

Indicator	Unit	Al-Trestle PR00104	Coated Trestle PR00104	Al-Trestle PR00105/08	Coated Trestle PR00105/08	Al-Trestle PR00106	Coated Trestle PR00106	Al-Trestle PR00107	Coated Trestle PR00107
GWP-total	kg CO_2 eq	46.6%	47.1%	46.5%	47.0%	46.5%	47.0%	46.5%	47.0%
GWP-fossil	kg CO_2 eq	46.9%	47.4%	46.8%	47.3%	46.8%	47.3%	46.8%	47.3%
GWP-biogenic	kg CO_2 eq	34.2%	34.3%	34.2%	34.3%	34.2%	34.3%	34.2%	34.3%
GWP-luluc	kg CO_2 eq	48.7%	49.0%	48.7%	49.0%	48.7%	49.0%	48.7%	49.0%
ODP	kg CFC11 eq	40.0%	41.0%	39.6%	40.6%	39.7%	40.7%	40.2%	41.2%

AP	mol H^+ eq	56.4%	56.7%	56.1%	56.4%	56.1%	56.4%	56.1%	56.4%
EP-freshwater	kg P eq	47.7%	48.1%	47.6%	48.0%	47.7%	48.0%	47.7%	48.1%
EP-marine	kg N eq	50.7%	51.1%	50.6%	51.0%	50.7%	51.0%	50.7%	51.0%
EP-terrestrial	mol N eq	52.2%	52.5%	52.1%	52.5%	52.2%	52.5%	52.2%	52.5%
POCP	kg NMVOC eq	48.6%	49.2%	48.5%	49.0%	48.5%	49.0%	48.5%	49.1%
ADPE	kg Sb eq	51.0%	51.3%	51.0%	51.3%	51.1%	51.4%	51.0%	51.4%
ADPF	MJ	45.1%	45.8%	44.9%	45.7%	44.9%	45.7%	45.0%	45.7%
WDP	m^3 depriv.	30.6%	31.4%	30.4%	31.2%	30.4%	31.2%	30.2%	31.0%

ALTERNATIVE EOL SCENARIOS: 100% RECYCLING, 100% LANDFILLING AND 100% INCINERATING

In accordance with PCR requirements, the LCA results for the following alternative end-of-life scenarios are reported below:

- 100% Recycling;
- 100% Landfilling;
- 100% Incinerating.

Table 11 – Additional LCA results, EoL 100% recycling

Results for declared unit, 100% recycling scenario						
Indicator	Unit	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	0.00E+00	1.01E-01	8.55E-01	0.00E+00	-2.85E+00
GWP-fossil	kg CO_2 eq.	0.00E+00	1.01E-01	5.46E-01	0.00E+00	-3.03E+00
GWP-biogenic	kg CO_2 eq.	0.00E+00	2.25E-05	2.22E-01	0.00E+00	4.75E-02
GWP-luluc	kg CO_2 eq.	0.00E+00	3.71E-05	5.90E-04	0.00E+00	-1.15E-03
ODP	kg CFC 11 eq.	0.00E+00	1.91E-09	7.16E-09	0.00E+00	-2.67E-08
AP	mol H^+eq.	0.00E+00	3.31E-04	2.46E-03	0.00E+00	-1.15E-02
EP-freshwater	kg P eq.	0.00E+00	8.21E-06	1.52E-04	0.00E+00	-1.94E-03
EP-marine	kg N eq.	0.00E+00	1.09E-04	1.07E-03	0.00E+00	-2.50E-03
EP-terrestrial	mol N eq.	0.00E+00	1.19E-03	8.00E-03	0.00E+00	-2.77E-02
POCP	kg NMVOC eq.	0.00E+00	4.84E-04	2.96E-03	0.00E+00	-1.04E-02
ADP-minerals & metals	kg Sb eq.	0.00E+00	3.37E-07	3.99E-06	0.00E+00	-2.33E-05
ADP-fossil	MJ	0.00E+00	1.42E+00	7.25E+00	0.00E+00	-3.76E+01
WDP	m^3 world eq. deprived	0.00E+00	5.85E-03	1.10E-01	0.00E+00	-4.86E-01
GWP-GHG	kg CO_2 eq.	0.00E+00	1.01E-01	7.68E-01	0.00E+00	-2.99E+00
PM	Disease incidence	0.00E+00	7.99E-09	1.17E-07	0.00E+00	-1.83E-07
IRP	kBq U235 eq.	0.00E+00	1.52E-03	2.20E-02	0.00E+00	-5.35E-02
ETP-fw	CTUe	0.00E+00	2.11E-01	5.81E+00	0.00E+00	-1.65E+01
HTP-c	CTUh	0.00E+00	1.71E-11	8.95E-10	0.00E+00	-8.61E-10
HTP-nc	CTUh	0.00E+00	8.83E-10	1.07E-08	0.00E+00	-1.46E-08
SQP	dimensionless	0.00E+00	8.38E-01	8.14E+00	0.00E+00	-1.92E+01
PERE	MJ	0.00E+00	2.13E-02	4.15E-01	0.00E+00	-4.54E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	0.00E+00	2.13E-02	4.15E-01	0.00E+00	-4.54E+00
PENRE	MJ	0.00E+00	1.42E+00	7.25E+00	0.00E+00	-3.76E+01
PENRM	MJ	0.00E+00	0.00E+00	-8.68E+01	0.00E+00	0.00E+00
PENRT	MJ	0.00E+00	1.42E+00	-7.96E+01	0.00E+00	-3.76E+01
SM	kg	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
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	0.00E+00	1.83E-04	3.07E-03	0.00E+00	-1.25E-02
Hazardous waste disposed	kg	0.00E+00	9.65E-06	6.97E-05	0.00E+00	-4.75E-04
Non-hazardous waste disposed	kg	0.00E+00	6.74E-02	5.34E+00	0.00E+00	-1.57E-01
Radioactive waste disposed	kg	0.00E+00	3.75E-07	5.53E-06	0.00E+00	-1.36E-05
Components for re-use	kg	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	5.04E+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

Results for declared unit, 100% recycling scenario						
Exported energy, electricity	MJ	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

Table 12 - Additional LCA results, EoL 100% landfilling

Results for declared unit, 100% landfilling scenario						
Indicator	Unit	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	0.00E+00	1.01E-01	0.00E+00	2.84E-01	-5.75E+00
GWP-fossil	kg CO_2 eq.	0.00E+00	1.01E-01	0.00E+00	2.84E-01	-5.72E+00
GWP-biogenic	kg CO_2 eq.	0.00E+00	2.25E-05	0.00E+00	3.71E-05	-7.88E-03
GWP-luluc	kg CO_2 eq.	0.00E+00	3.71E-05	0.00E+00	1.79E-05	-1.37E-02
ODP	kg CFC 11 eq.	0.00E+00	1.91E-09	0.00E+00	1.20E-09	-1.28E-07
AP	mol H^+eq.	0.00E+00	3.31E-04	0.00E+00	2.87E-04	-2.31E-02
EP-freshwater	kg P eq.	0.00E+00	8.21E-06	0.00E+00	3.62E-06	-4.08E-03
EP-marine	kg N eq.	0.00E+00	1.09E-04	0.00E+00	1.34E-03	-4.38E-03
EP-terrestrial	mol N eq.	0.00E+00	1.19E-03	0.00E+00	1.24E-03	-3.89E-02
POCP	kg NMVOC eq.	0.00E+00	4.84E-04	0.00E+00	5.11E-04	-1.35E-02
ADP-minerals & metals	kg Sb eq.	0.00E+00	3.37E-07	0.00E+00	7.44E-08	-5.13E-06
ADP-fossil	MJ	0.00E+00	1.42E+00	0.00E+00	9.89E-01	-1.25E+02
WDP	m^3 world eq. deprived	0.00E+00	5.85E-03	0.00E+00	-1.22E-01	-1.04E+00
GWP-GHG	kg CO_2 eq.	0.00E+00	1.01E-01	0.00E+00	2.84E-01	-5.74E+00
PM	Disease incidence	0.00E+00	7.99E-09	0.00E+00	6.80E-09	-8.68E-08
IRP	kBq U235 eq.	0.00E+00	1.52E-03	0.00E+00	1.09E-03	-2.95E+00
ETP-fw	CTUe	0.00E+00	2.11E-01	0.00E+00	3.95E-01	-9.74E+00
HTP-c	CTUh	0.00E+00	1.71E-11	0.00E+00	9.93E-12	-7.85E-10
HTP-nc	CTUh	0.00E+00	8.83E-10	0.00E+00	1.07E-09	-2.79E-08
SQP	dimensionless	0.00E+00	8.38E-01	0.00E+00	2.23E+00	-2.68E+01
PERE	MJ	0.00E+00	2.13E-02	0.00E+00	1.72E-02	-2.50E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	0.00E+00	2.13E-02	0.00E+00	1.72E-02	-2.50E+01
PENRE	MJ	0.00E+00	1.42E+00	0.00E+00	8.78E+01	-1.25E+02
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	-8.68E+01	0.00E+00
PENRT	MJ	0.00E+00	1.42E+00	0.00E+00	9.89E-01	-1.25E+02
SM	kg	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
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	0.00E+00	1.83E-04	0.00E+00	-1.09E-02	-6.54E-02
Hazardous waste disposed	kg	0.00E+00	9.65E-06	0.00E+00	6.65E-06	-3.33E-04
Non-hazardous waste disposed	kg	0.00E+00	6.74E-02	0.00E+00	5.04E+00	-2.62E-01
Radioactive waste disposed	kg	0.00E+00	3.75E-07	0.00E+00	2.56E-07	-7.56E-04
Components for re-use	kg	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
Materials for Energy recovery	kg	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

Results for declared unit, 100% landfilling scenario						
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Tabella 13 - Additional LCA results, EoL 100% incinerating

Results for declared unit, 100% incinerating scenario						
Indicator	Unit	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	0.00E+00	1.50E-01	0.00E+00	6.98E+00	-6.40E+00
GWP-fossil	kg CO_2 eq.	0.00E+00	1.50E-01	0.00E+00	6.97E+00	-6.35E+00
GWP-biogenic	kg CO_2 eq.	0.00E+00	3.34E-05	0.00E+00	9.03E-05	-6.34E-03
GWP-luluc	kg CO_2 eq.	0.00E+00	5.51E-05	0.00E+00	5.43E-05	-1.49E-02
ODP	kg CFC 11 eq.	0.00E+00	2.84E-09	0.00E+00	1.83E-09	-1.45E-07
AP	mol H^+eq.	0.00E+00	4.90E-04	0.00E+00	1.17E-03	-2.54E-02
EP-freshwater	kg P eq.	0.00E+00	1.22E-05	0.00E+00	4.10E-05	-4.47E-03
EP-marine	kg N eq.	0.00E+00	1.62E-04	0.00E+00	5.74E-04	-4.81E-03
EP-terrestrial	mol N eq.	0.00E+00	1.76E-03	0.00E+00	5.86E-03	-4.28E-02
POCP	kg NMVOC eq.	0.00E+00	7.18E-04	0.00E+00	1.53E-03	-1.51E-02
ADP-minerals & metals	kg Sb eq.	0.00E+00	5.01E-07	0.00E+00	2.49E-07	-5.77E-06
ADP-fossil	MJ	0.00E+00	2.11E+00	0.00E+00	1.31E+00	-1.40E+02
WDP	m^3 world eq. deprived	0.00E+00	8.68E-03	0.00E+00	4.03E-02	-1.18E+00
GWP-GHG	kg CO_2 eq.	0.00E+00	1.50E-01	0.00E+00	6.97E+00	-6.37E+00
PM	Disease incidence	0.00E+00	1.19E-08	0.00E+00	1.22E-08	-9.25E-08
IRP	kBq U235 eq.	0.00E+00	2.26E-03	0.00E+00	1.90E-03	-3.23E+00
ETP-fw	CTUe	0.00E+00	3.13E-01	0.00E+00	2.17E+00	-1.07E+01
HTP-c	CTUh	0.00E+00	2.53E-11	0.00E+00	2.03E-10	-8.54E-10
HTP-nc	CTUh	0.00E+00	1.31E-09	0.00E+00	8.00E-09	-3.07E-08
SQP	dimensionless	0.00E+00	1.24E+00	0.00E+00	9.50E-01	-2.82E+01
PERE	MJ	0.00E+00	3.16E-02	0.00E+00	3.16E-02	-2.72E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	0.00E+00	3.16E-02	0.00E+00	3.16E-02	-2.72E+01
PENRE	MJ	0.00E+00	2.11E+00	0.00E+00	4.96E+01	-1.40E+02
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	-8.68E+01	0.00E+00
PENRT	MJ	0.00E+00	2.11E+00	0.00E+00	-3.72E+01	-1.40E+02
SM	kg	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
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	0.00E+00	2.72E-04	0.00E+00	1.87E-03	-7.20E-02
Hazardous waste disposed	kg	0.00E+00	1.43E-05	0.00E+00	1.44E-05	-4.03E-04
Non-hazardous waste disposed	kg	0.00E+00	1.00E-01	0.00E+00	6.38E-02	-2.82E-01
Radioactive waste disposed	kg	0.00E+00	5.57E-07	0.00E+00	4.74E-07	-8.29E-04
Components for re-use	kg	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
Materials for Energy recovery	kg	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
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ADDITIONAL ENVIRONMENTAL INFORMATION

The Catifa (RE) 46 product is GREENGUARD GOLD certified, ensuring compliance with the emission limits of UL 2818.

License number: 418676-420, Validity: from 2025-11-20 to 2026-11-04

VERSION HYSTORY

2026-06-30 Version 1

2026-07-06 Version 2

Verification: Editorial revisions.

ABBREVIATIONS

CO_2 Carbon dioxide

CPC Central product classification

EPD Environmental product declaration

GHG Greenhouse gas

GPI General Programme Instructions

GWP Global warming potential

ISO International Organization for Standardization

LCA Life cycle assessment

LCI Life cycle inventory

PCR Product category rules

RSL Reference service life

SVHC Substance of very high concern

UN United Nations

BIBLIOGRAPHY

Arper spa (https://www.arper.com/it_IT/)

Arper spa, 2B S.r.l., Manuale descrittivo della procedura EPD Arper v.2.0, gennaio 2026

Arper spa, 2B S.r.l., Raccolta dei dati LCA/EPD v.2.0 gennaio 2026

LCA report: 2B srl, LCA report of Catifa (RE) 46, June 2026

Ecoinvent, 2024: Swiss Centre for Life Cycle Assessment, provider of the ecoinvent database v3.11 (www.ecoinvent.ch).

ISO 14025:2006. Environmental labels and declarations, type 3 environmental declarations, principles and procedures (www.iso.org).

ISO 14040/14044:2021. ISO series on Life Cycle Assessment, UNI EN ISO 14040:2021 e 14044:2021 (www.iso.org).

Eurostat Database, 2024 (https://ec.europa.eu/eurostat/en/).

OECD Database, 2024 (www.oecd.org).

PCR 2019:14 v2.0.1 Product Category Rules (PCR) for preparing an environmental product declaration (EPD) for other furniture, the Swedish Environmental Management Council (www.environdec.com).

PCR 2019:14-c-PCR-021 Furniture (c-PCR to PCR 2019:14). Product Category Rules (PCR) for preparing an environmental product declaration (EPD) for other furniture, the Swedish Environmental Management Council (www.environdec.com)

UNI EN 15804:2012+A2:2019: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

Product Environmental Footprint (PEF), Annex_C_V2.1_May2020.

General Programme Instructions for Environmental Product Declaration EPD, Version 5.0. Swedish Environmental Management Council (www.environdec.com).

PRé Sustainability, Netherlands. SimaPro software, version 10.2 (https://simapro.com/).

Ecotransit (https://emissioncalculator.ecotransit.world/)

Google Maps (https://www.google.it/maps)

EEA (European Environment Agency), Technical report No 3/2012. Annual European Union greenhouse gas inventory 1990–2010 and inventory report 2012.