

# ENVIRONMENTAL PRODUCT DECLARATION

## CATIFA 53

with polypropylene shell

four legs base model, in chromed or painted steel,

trestle base model, painted or aluminum finish



EPD Program: International EPD System ([www.environdec.com](http://www.environdec.com))

Programme operator: EPD International AB

Reference GPI: General Programme Instructions IES v.3.01

Reference PCR: PCR 2009:02 v3.0 "Seats" CPC Code: 3811

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# arper

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## THE COMPANY AND THE PRODUCT

Arper is working on the assessment of the environmental impact of some of its products, to encourage the research aimed at both the improvement of its technical and environmental performances and to realize its commitment to the respect of the environment. Arper has already obtained an EPD certification for several of its products and aims at obtaining it for all the most representative models of its production.

### ARPER

Arper manufactures chairs, tables and furnishing accessories. Arper's approach is relationship-oriented, and it translates into a design aimed at aesthetics and usability; from a global, innovative and personalized perspective; in the valorization of local contexts within the internationalization strategies; in organizational policies always based on transparency and the preservation of a solid and coherent brand identity.

Arper values the importance of environmental sustainability and it is characterized by an increasing commitment in this area: in 2006 it adopted the ISO 14001 environmental management system, in 2007 it introduced the use of the LCA tool, obtaining several product certifications that highlight the different aspects of the achieved results. Through LCA Arper obtained the EPD (Environmental Product Declaration), an ecolabel that requires the implementation of an LCA study and compliance with a set of pre-established requirements, defined by product category (Product Category Rules).

### PRODUCT DESCRIPTION

Suitable for both indoor or outdoor spaces, Catifa 53 is available in a wide range of materials, colors and finishes of the shell and trunk. The shell is made of curved plywood, one- or two colors polypropylene, with either soft-, hard leather or fabric covering and various padded finishes. The frame is available in chromed steel, satin stainless steel, aluminum, powder-coated aluminum, wood and it is available in different versions: four legs, sled and trestle.

This declaration describes Catifa 53 with propylene shell and a 4-legs base or trestle structure. The 4-legs base is available with a painted or chromed steel finish, the one with trestle structures one comes with a painted or aluminum finish.

This EPD summarizes the indicators related to the environmental impact of Catifa 53 with a white body, which can also be considered representative for versions featuring a body in different colors (black, sepia, anthracite, ivory, yellow, sand, caramel). In fact, it has been ascertained that the differences between the masters account for less than 10% on the overall impact of Catifa, as contemplated by the PCR adopted.

Figure 1 and Figure 2 show the exploded views of the Catifa 53 chair with the 4 legs and trestle base, while Table 1 and Table 2 summarize the materials of the chairs and of the packaging. Either the single chair can be individually packed, or 4 pieces together.

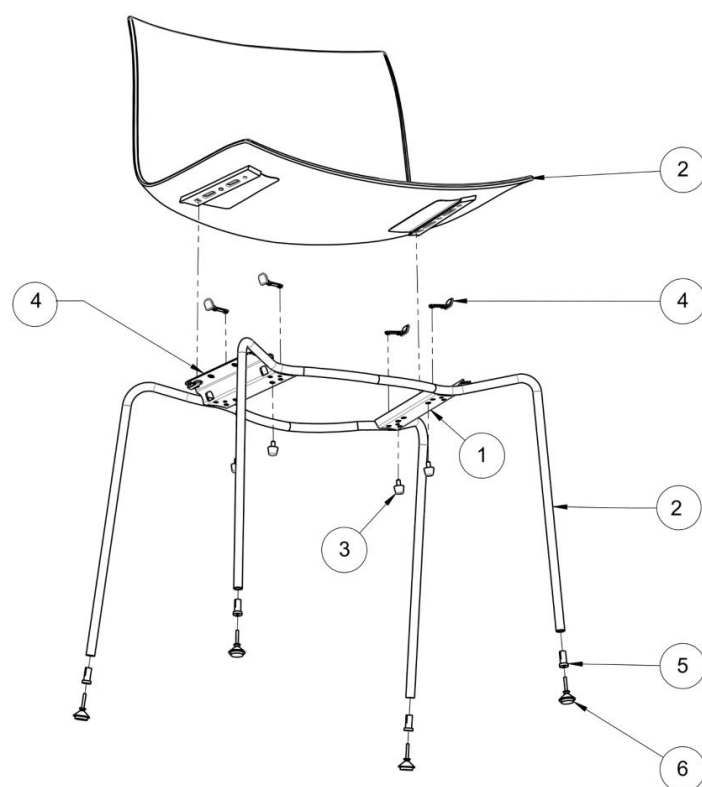


Figure 1 Exploded view of Catifa 46 chair with 4-legs base. 1) PP shell; 2) 4-Legs base; 3) Trays; 4) "Clip It Easy"; 5) Hole cover; 6) Leg cap.

	Materials	Catifa 53 4 legs, chromed		Catifa 53 4 legs, painted	
		kg	%	kg	%
Catifa 53	PP	2.720	52%	2.720	52%
	Steel	2.460	47%	2.460	47%
	PE	0.070	1%	0.070	1%
	Total	5.250	100%	5.250	100%
Packaging x 1	Cardboard	3.413	97%	3.413	96%
	PE	0.071	2%	0.096	3%
	Paper	0.022	1%	0.022	1%
	Steel	0.021	1%	0.021	1%
	Total	3.526	100%	3.551	100%
Packaging x 4	Cardboard	5.169	94%	5.169	93%
	PE	0.272	5%	0.372	7%
	Steel	0.041	1%	0.041	1%
	Paper	0.022	0%	0.000	0%
	Total	5.504	100%	5.582	100%

Table 1: Materials in Catifa 53, four legs

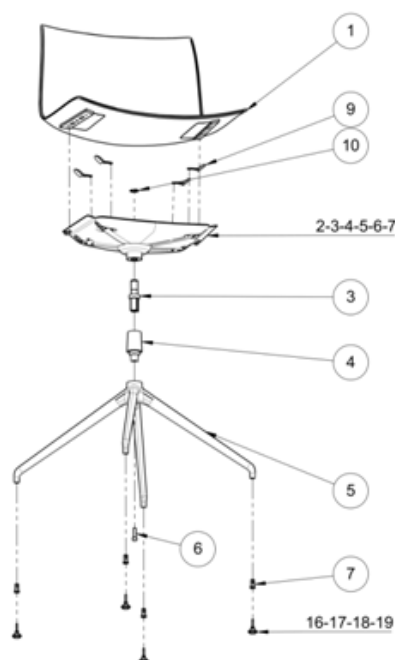


Figure 2: Exploded view of Catifa 53 chair with trestle base. PP shell; 2-7) Undershell plate; 8) Seeger; 9) Leg pin; 10) Conical adapter; 11) 4-ways base; 12-13) Screw, Washer; 14) Hole cover; 15) Leg cap expander; 16-19) Leg cap.

	Materials	Catifa 53, trestle base, aluminium		Catifa 53 trestle base, painted	
		kg	%	kg	%
Catifa	Steel	3.007	37%	3.075	37%
	PP	2.724	33%	2.736	33%
	Aluminum	2.400	29%	2.4415	29%
	GEBO15	0.029	0%	0.029	0%
	PE	0.010	0%	-	-
	Total	8.169	100%	8.281	100%
Packaging x 1	Cardboard	3.5215	97%	3.5215	89%
	PE	0.0845	2%	0.3845	10%
	Paper	0.022	1%	0.022	1%
	Steel	0.02	1%	0.02	1%
	Total	3.648	100%	3.948	100%
Packaging x 4	Cardboard	4.959	76%	4.959	76%
	PE	1.522	23%	1.522	23%
	Steel	0.04	1%	0.04	1%
	Paper	0.022	0%	0.022	0%
	Total	6.543	100%	6.543	100%

Table 2: Materials in Catifa 53 with trestle base

## ENVIRONMENTAL IMPACT DECLARATION

### DECLARED UNIT

The declared unit considered is 1 seat with a duration of 15 years.

### SYSTEM BOUNDARIES

The system boundaries include the production of raw materials, the production of components and packaging materials, assembly, transport of raw materials and components, storage, distribution, use phase and end of life packaging and product.

Specifically, upstream processes include raw materials, their transport, the production of the chair components, the assembly of the structure of the legs and of the body and the packaging of the body and of the structure.

Core processes include: transport to the storage warehouse and consumption of electricity and water for storage. The assembly of the product and its production are not included because Arper does not manufacture or assemble its products internally.

The downstream processes include the distribution of the packaged product, the use phase and the end of life of the packaging and of the product.

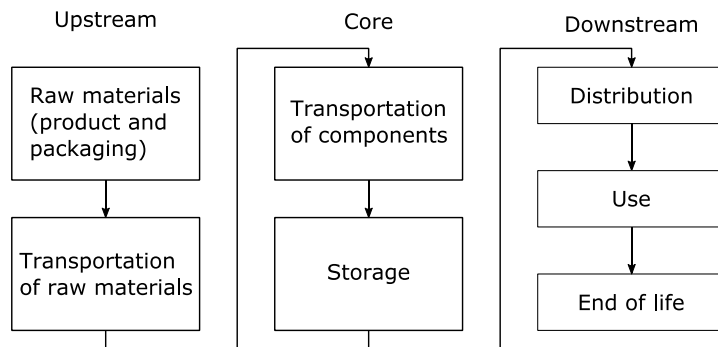


Figure 1: System Boundaries of the LCA of Catifa 53 chair

### TIME BOUNDARIES

Primary data come from Arper and are referred to the year 2019. Secondary data come from the Ecoinvent v 3.5 database, allocation and cut-off by classification, published in 2019.

### TERRITORIAL BOUNDARIES

Components and packaging materials are produced in Italy, with the exception of the 4-ways base of the trestle, which are produced in Vietnam. The product is marketed both in Italy and abroad. The distribution and end-of-life scenario consider the sales of the reference year.

## BOUNDARIES IN THE LIFE CYCLE

The construction of the company's buildings and infrastructure, the production of work equipment, other capital assets and personnel activities are not included in the LCA. For processes comprising the infrastructure, such as the processes deriving from the ecoinvent database, the infrastructure has not been omitted.

## ALLOCATION RULES

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 consumptions of the storage warehouse volume allocation has been applied.

## DATA QUALITY

This LCA study is based on primary data for the fundamental aspects of the study, such as the weight of the packaging components and materials. Primary data were collected from Arper's suppliers. For secondary data, the ecoinvent v3.5 database was used. Some ecoinvent v3.5 processes, such as powder coating, welding, extrusion of steel bars and injection molding of plastic parts, have been adapted to the Italian situation (or Vietnamese in the case of the spokes of the trestle base) changing the energy mix in order to make them more representative of the system studied.

The LCA calculation was performed using the SimaPro 9 software.

The use of proxy data does not exceed the limit of 10% of the overall impact of the main impact categories, as contemplated by the reference PCRs. All the material inputs of the production process have been considered.

For data collection and LCA calculations, the methodology described in the manual for data collection and the EPD processing process was used.

For the main components of the chair, primary data about consumption of production processes were obtained from the supplier. The components for which primary data have been made available are: the polypropylene shell; for the 4 leg version: the legs, the trays, the clips, the feet and the stacking caps, data on chromium-plating and painting processes; for the trestle version, data about the clips.

The process related to the Italian national mix available in the ecoinvent database "Electricity, medium voltage {IT} | market for | Cut-off, S ". The Vietnamese energy mix was used for the production of the trestle base. "Electricity, medium voltage {VN} | market for electricity, medium voltage | Cut-off, S ".

For the packaging methods of Catifa 53, the information from the sales data in the year 2019 was used: 84.3% of the Catifa 53 4-legs and 81.7% of the Catifa 53 trestle base, respectively, are packed in a 4-piece box packaging.

For the product storage primary data were used, provided by the company responsible for the storage of shells and packed structures.

In the distribution phase, sales data were used, considering a road transport (ecoinvent database process: Transport, freight, lorry > 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 (truck > 32 t EURO 5) 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, a local transport of 300 km by road (truck 16-32 t EURO 5) is evaluated.



In the use phase, a consumption of 0.1 l of hot water and 0.8 g of chair soap is assumed. For soap, a solution with 5% Alkylbenzene sulfonate is considered. To heat the water, a consumption of 5.58 MJ of thermal energy is assumed.

For the start of the product and packaging at the end of its life, a road transport (truck 16-32 t EURO 5) for 100 km is assumed. For the end-of-life scenario, average national data were used for the countries in which the product is sold.

## ENVIRONMENTAL IMPACT INDICATORS

The following tables show the environmental impact indicators for the life cycle of 1 Catifa 53 chair with 4-legs base, chrome-plated and painted versions and trestle, aluminum and painted versions.

Environmental indicators consist of 10 impact categories (global warming total/fossil/biogenic/land use, acidification, photochemical smog, eutrophication, abiotic depletion, abiotic depletion for fossil fuels and water scarcity), material and energy resources (renewable and non renewable), human toxicity, ecotoxicity and land use, consumption of water and waste. The indicators are divided into the contribution of the upstream, core and downstream phases.

Impact category	Units	Total	Upstream	Core	Downstream
Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	28.7	23.9	0.1	4.6
Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	27.9	23.6	0.1	4.2
Global warming (GWP100a)_ biogenic	kg CO <sub>2</sub> eq	0.705	0.340	0.004	0.361
Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	0.033	0.032	0.000	0.001
Acidification Potential	Kg SO <sub>2</sub> eq	0.129	0.113	0.001	0.015
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup>	0.054	0.045	0.000	0.009
Photochemical ozone formation, HH	kg NMVOC eq	0.099	0.086	0.000	0.013
Abiotic depletion	Kg Sb eq	0.000	0.000	0.000	0.000
Abiotic depletion (fossil fuels)	MJ	438	407	2	28
Water scarcity	m <sup>3</sup> eq	4443	4352	23	68
Renewable resources, energy	MJ	47.7	46.5	0.2	1.0
Renewable resources, materials	MJ	-	-	-	-
Renewable resources, total	MJ	47.7	46.5	0.2	1.0
Non renewable resources, energy	MJ	0.056	0.055	0.000	0.001
Non renewable resources, materials	MJ	521	486	2	32
Non renewable resources, total	MJ	521	486	2	32
Water use*	m <sup>3</sup>	138	132	1	5
Hazardous waste	kg	0.811	0.061	0.000	0.750
Non hazardous waste	kg	9.89	4.34	0.07	5.48
Radioactive waste	kg	-	-	-	-
Human toxicity, cancer	cases	0.000	0.000	0.000	0.000
Human toxicity, non-cancer	cases	0.000	0.000	0.000	0.000
Freshwater ecotoxicity	PAF.m <sup>3</sup> .day	531021	161570	232	369219
Land use	species.yr	0.000	0.000	0.000	0.000

Table 3 Results of the characterization of the Catifa 53 chair, 4-legs, chromed finish.

\* the total amount of water includes all direct and indirect consumptions of softwater in the system studied. Cooling water is omitted in this calculation.

TABLE 4: CATIFA 53, 4 LEGS, CHROMED FINISH, MATERIAL AND ENERGY RESOURCES		Unit	Total	Upstream	Core	Downstream
Non-renewable resources, materials	Total	MJ	521	486	2	32
	Gas, natural/m3	MJ	220	198	1	20
	Oil, crude	MJ	155	146	0	8
	Coal, hard	MJ	85	82	0	2
	Uranium	MJ	49	47	0	2
	Coal, brown	MJ	10	10	0	0
	Other	MJ	2	2	0	0
Non-renewable resources, energy	Total	MJ	0.056	0.055	0.000	0.001
	Energy, gross calorific value, in biomass	MJ	0.056	0.055	0.000	0.001
Renewable resources, materials	Total	MJ	-	-	-	-
Renewable resources, energy	Total	MJ	47.7	46.5	0.2	1.0
	Energy, gross calorific value, in biomass	MJ	21.5	20.7	0.1	0.7
	Energy, potential, hydropower	MJ	20.0	19.9	0.0	0.2
	Energy, kinetic	MJ	4.1	4.0	0.0	0.1
	Other	MJ	2.0	2.0	0.0	0.0

Table 4 Inventory of the material and energetic resources of the Catifa 53 4-legs, chromed

TABLE 5: CATIFA 53, 4 LEGS, PAINTED, ENVIRONMENTAL INDICATORS

Impact category	Units	Total	Upstream	Core	Downstream
Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	32.0	27.2	0.1	4.6
Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	31.2	26.8	0.1	4.3
Global warming (GWP100a)_ biogenic	kg CO <sub>2</sub> eq	0.694	0.330	0.004	0.361
Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	0.043	0.043	0.000	0.001
Acidification Potential	Kg SO <sub>2</sub> eq	0.171	0.156	0.001	0.015
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup>	0.059	0.050	0.000	0.009
Photochemical ozone formation, HH	kg NMVOC eq	0.110	0.097	0.000	0.013
Abiotic depletion	Kg Sb eq	0.000	0.000	0.000	0.000
Abiotic depletion (fossil fuels)	MJ	484	454	2	28
Water scarcity	m <sup>3</sup> eq	4883	4791	23	68
Renewable resources, energy	MJ	50.3	49.1	0.2	1.0
Renewable resources, materials	MJ	-	-	-	-
Renewable resources, total	MJ	50.3	49.1	0.2	1.0
Non renewable resources, energy	MJ	0.091	0.090	0.000	0.001
Non renewable resources, materials	MJ	576	541	2	33
Non renewable resources, total	MJ	576	541	2	33
Water use*	m <sup>3</sup>	151	145	1	5
Hazardous waste	kg	0.815	0.064	0.000	0.750
Non hazardous waste	kg	10.3	4.7	0.1	5.5
Radioactive waste	kg	-	-	-	-
Human toxicity, cancer	cases	0.000	0.000	0.000	0.000
Human toxicity, non-cancer	cases	0.000	0.000	0.000	0.000
Freshwater ecotoxicity	PAF.m <sup>3</sup> .day	528848	159367	232	369249
Land use	species.yr	0.000	0.000	0.000	0.000

Table 5 Results of the characterization of the Catifa 53 4 legs, painted.

\* The total amount of water includes all direct and indirect consumptions of softwater in the system studied. Cooling water is omitted in this calculation.

TABLE 6: CATIFA 53, 4 LEGS, PAINTED, MATERIAL AND ENERGY RESOURCES		Unit	Total	Upstream	Core	Downstream
Non-renewable resources, materials	Total	MJ	576	541	2	33
	Gas, natural/m3	MJ	228	207	1	20
	Oil, crude	MJ	185	177	0	8
	Coal, hard	MJ	95	93	0	2
	Uranium	MJ	53	51	0	2
	Coal, brown	MJ	12	12	0	0
	Other	MJ	2	2	0	0
Non-renewable resources, energy	Total	MJ	0.091	0.090	0.000	0.001
	Energy, gross calorific value, in biomass	MJ	0.091	0.090	0.000	0.001
Renewable resources, materials	Total	MJ	-	-	-	-
Renewable resources, energy	Total	MJ	50.3	49.1	0.2	1.0
	Energy, gross calorific value, in biomass	MJ	23.0	22.2	0.1	0.7
	Energy, potential, hydropower	MJ	20.8	20.6	0.0	0.2
	Energy, kinetic	MJ	4.4	4.3	0.0	0.1
	Other	MJ	2.1	2.0	0.0	0.0

Table 6 Inventory material and energetic resources of a Catifa 53 4-legs, painted.

TABLE 7: CATIFA 53, TRESTLE, ALUMINIUM, ENVIRONMENTAL INDICATORS

Impact category	Units	Total	Upstream	Core	Downstream
Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	48.9	43.5	0.2	5.2
Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	48.2	43.3	0.2	4.8
Global warming (GWP100a)_ biogenic	kg CO <sub>2</sub> eq	0.544	0.136	0.005	0.403
Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	0.078	0.077	0.000	0.001
Acidification Potential	Kg SO <sub>2</sub> eq	0.257	0.235	0.001	0.021
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup>	0.091	0.080	0.000	0.011
Photochemical ozone formation, HH	kg NMVOC eq	0.174	0.155	0.001	0.018
Abiotic depletion	Kg Sb eq	0.001	0.001	0.000	0.000
Abiotic depletion (fossil fuels)	MJ	661	621	2	38
Water scarcity	m <sup>3</sup> eq	9560	9441	27	92
Renewable resources, energy	MJ	78.9	77.4	0.2	1.3
Renewable resources, materials	MJ	-	-	-	-
Renewable resources, total	MJ	78.9	77.4	0.2	1.3
Non renewable resources, energy	MJ	0.055	0.054	0.000	0.001
Non renewable resources, materials	MJ	779	734	3	43
Non renewable resources, total	MJ	779	734	3	43
Water use*	m <sup>3</sup>	299	292	1	7
Hazardous waste	kg	1.43	0.33	0.00	1.11
Non hazardous waste	kg	15.7	7.6	0.1	8.0
Radioactive waste	kg	-	-	-	-
Human toxicity, cancer	cases	0.000	0.000	0.000	0.000
Human toxicity, non-cancer	cases	0.000	0.000	0.000	0.000
Freshwater ecotoxicity	PAF.m <sup>3</sup> .day	5915099	1039575	274	4875250
Land use	species.yr	0.000	0.000	0.000	0.000

Table 7 Results of the characterization of Catifa 53, trestle, aluminum.

\* The total amount of water includes all direct and indirect consumptions of softwater in the system studied. Cooling water is omitted in this calculation.

TABLE 8: CATIFA 53, TRESTLE, ALUMINIUM, MATERIAL AND ENERGY RESOURCES		Unit	Total	Upstream	Core	Downstream
Non-renewable resources, materials	Total	MJ	779	734	3	43
	Gas, natural/m3	MJ	278	248	2	29
	Oil, crude	MJ	225	215	1	9
	Coal, hard	MJ	184	181	0	2
	Uranium	MJ	68	65	0	3
	Coal, brown	MJ	21	21	0	1
	Other	MJ	4	4	0	0
Non-renewable resources, energy	Total	MJ	0.055	0.054	0.000	0.001
	Energy, gross calorific value, in biomass	MJ	0.055	0.054	0.000	0.001
Renewable resources, materials	Total	MJ	-	-	-	-
Renewable resources, energy	Total	MJ	78.9	77.4	0.2	1.3
	Energy, gross calorific value, in biomass	MJ	43.8	42.7	0.1	1.0
	Energy, potential, hydropower	MJ	27.7	27.5	0.0	0.2
	Energy, kinetic	MJ	5.0	4.9	0.0	0.1
	Other	MJ	2.3	2.3	0.0	0.0

Table 8 Inventory of material and energetic resources of a Catifa 53 trestle, aluminum.

TABLE 9: CATIFA 53, TRESTLE, PAINTED, ENVIRONMENTAL INDICATORS

Impact category	Units	Total	Upstream	Core	Downstream
Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	50.7	45.3	0.2	5.3
Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	50.1	45.1	0.2	4.8
Global warming (GWP100a)_ biogenic	kg CO <sub>2</sub> eq	0.553	0.145	0.005	0.403
Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	0.083	0.082	0.000	0.001
Acidification Potential	Kg SO <sub>2</sub> eq	0.284	0.261	0.001	0.022
Eutrophication potential	kg PO <sub>4</sub> <sup>3-</sup>	0.093	0.082	0.000	0.011
Photochemical ozone formation, HH	kg NMVOC eq	0.179	0.160	0.001	0.018
Abiotic depletion	Kg Sb eq	0.001	0.001	0.000	0.000
Abiotic depletion (fossil fuels)	MJ	690	649	2	38
Water scarcity	m <sup>3</sup> eq	9742	9622	27	93
Renewable resources, energy	MJ	80.9	79.3	0.2	1.3
Renewable resources, materials	MJ	-	-	-	-
Renewable resources, total	MJ	80.9	79.3	0.2	1.3
Non renewable resources, energy	MJ	0.074	0.073	0.000	0.001
Non renewable resources, materials	MJ	813	767	3	44
Non renewable resources, total	MJ	813	767	3	44
Water use*	m <sup>3</sup>	306	298	1	7
Hazardous waste	kg	1.44	0.33	0.00	1.12
Non hazardous waste	kg	16.0	7.8	0.1	8.1
Radioactive waste	kg	-	-	-	-
Human toxicity, cancer	cases	0.000	0.000	0.000	0.000
Human toxicity, non-cancer	cases	0.000	0.000	0.000	0.000
Freshwater ecotoxicity	PAF.m <sup>3</sup> .day	6000782	1045284	274	4955224
Land use	species.yr	0.000	0.000	0.000	0.000

Table 9 Results of the characterization of Catifa 53 trestle, painted.

\* The total amount of water includes all direct and indirect consumptions of softwater in the system studied. Cooling water is omitted in this calculation.



TABLE 10: CATIFA 53, TRESTLE, PAINTED , MATERIAL AND ENERGY RESOURCES		Unit	Total	Upstream	Core	Downstream
Non-renewable resources, materials	Total	MJ	813	767	3	44
	Gas, natural/m3	MJ	284	253	2	29
	Oil, crude	MJ	246	236	1	9
	Coal, hard	MJ	188	185	0	2
	Uranium	MJ	70	67	0	3
	Coal, brown	MJ	22	21	0	1
	Other	MJ	4	4	0	0
Non-renewable resources, energy	Total	MJ	0.074	0.073	0.000	0.001
	Energy, gross calorific value, in biomass	MJ	0.074	0.073	0.000	0.001
Renewable resources, materials	Total	MJ	-	-	-	-
Renewable resources, energy	Total	MJ	80.9	79.3	0.2	1.3
	Energy, gross calorific value, in biomass	MJ	44.9	43.8	0.1	1.0
	Energy, potential, hydropower	MJ	28.3	28.1	0.0	0.2
	Energy, kinetic	MJ	5.2	5.1	0.0	0.1
	Other	MJ	2.4	2.4	0.0	0.0

Table 10 Inventory of material and energetic resources of a Catifa 53 4 legs, painted.

## ADDITIONAL ENVIRONMENTAL INFORMATION

Since 2008 “Catifa 53” is GREENGUARD and GREENGUARD GOLD certified, certificate number: 5716-410 and 5716-420.

Catifa 53 with painted base (4-legs and trestle) or aluminum (trestle) is GECA certified, license number: ARP-2017, licensee since: 02 July 2009, license expiry date: 07 February 2020.





## INFORMATION ABOUT THE COMPANY AND ON THE CERTIFICATION

### ARPER – CONTACT INFORMATION

The Life Cycle Assessment Study (LCA) and this EPD were conducted by Arper in collaboration with Leo Breedveld, 2B Srl. ([www.to-be.it](http://www.to-be.it)). The Life Cycle Assessment Study (LCA) and this EPD were conducted by Arper in collaboration with Leo Breedveld, 2B Srl. ([www.to-be.it](http://www.to-be.it)). The Life Cycle Assessment Study (LCA) and this EPD were conducted by Arper in partnership with Leo Breeveld, 2B Srl ([www.to-be.it](http://www.to-be.it)). The company references are:

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### CERTIFICATION AND CERTIFICATION BODY INFORMATION

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PCR 2009:02, version 3.0 (UN CPC 3811, Seats), PCR review conducted by Leo Breedveld, available on the website of the International EPD Consortium (IEC): [www.environdec.com](http://www.environdec.com)

Quality audit for the declaration and the information in compliance with ISO 14025:2006

■ EPD process certification      □ EPD verification

Third party verifier: CSQA Certificazioni Srl, Via San Gaetano n. 74, 36016 Thiene (VI)

Phone: 0446-313011, Fax: 0446313070, [www.csqa.it](http://www.csqa.it).

Accredited by: Accredia (004H)

Procedure for follow-up of data during EPD validity involves third party verifier:

☒ Yes      ☐ No

## OTHER INFORMATION

This Environmental Product Declaration is developed under the EPD® International System. This document is available on the website of the Swedish Environmental Management Council ([www.environdec.com](http://www.environdec.com)).

EPDs belonging to the same product category may not be comparable. Comparisons between EPDs shall be done carefully, special attention shall be given to system boundaries and data sources.

## DIFFERENCES VERSUS PREVIOUS VERSIONS

In comparison to the previous version of this EPD, the reference PCR Seats 2009:02 has evolved from version 2.0 to version 3.0, the latter based on the newest version of the General Programme Instruction, version 3.1. Although the product composition is unaltered, new PCR and GPI require several updates like the addition of the reference Service Life (RSL), the update of the environmental indicators and the update of the additional environmental indicators. Furthermore, the company impacts (energy consumption and waste treatment), distribution statistics, end-of-life scenarios based on sales statistics have been updated to the new reference year (2019), resulting in minor changes in the environmental indicators (< 10%).

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