

ENVIRONMENTAL PRODUCT DECLARATION

CATIFA 53

with polypropylene shell

four leg base model, in chromed or painted steel,

trestle base model, painted or aluminum finish



EPD Program: International EPD System (www.environdec.com)

Programme operator: EPD International AB

Reference GPI: General Programme Instructions IES v.3.0

Reference PCR: PCR 2009:02 v2.0 "Seats" CPC Code: 3811

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THE INTERNATIONAL EPD® SYSTEM

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THE COMPANY AND THE PRODUCT

Arper's ecodesign programme aims at the reduction of its products' environmental impact, improve technical performances and fulfill its engagement towards the environment. Arper already obtained for some of its products the EPD certification and continues working on EPD certifications for the most representative collections of Arper.

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, ISO 14001 environmental management system was adopted, in 2007, the use of the LCA tool was introduced. 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). Arper obtained the first EPD certifications for Catifa 46 and Catifa 53 in 2008. In 2018 Arper obtained the EPD process certification.

PRODUCT DESCRIPTION

Made for both residential and contract use, indoors and out, the Catifa 53 shell and base are fabricated in a diverse range of materials, colours and finishes. The shell is constructed in double curved plywood, mono or bicolour polypropylene, covered in leather, hardleather, fabric or finished with upholstered pads. The base comes in chrome finish steel, satin finish stainless steel, aluminium, powder coated aluminium or wood, and is available in the following configurations: sled, four leg, trestle and five ways.

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

This EPD summarizes the indicators related to the environmental impact of Catifa 53 with a white shell, which can be considered representative for versions featuring a shell in different colours (black, sepia, anthracite, ivory, yellow, sand, caramel). Representativeness has been verified through sensitivity analysis.

Table 1 and Table 2 list the material declaration of both the chair and its packaging. The single chair can be packed individually, or 4 pieces together.

TABLE 1: MATERIALS OF THE CATIFA 53 WITH 4 LEG BASE.



| CATIFA 53 4 LEG | | CHROMED BASE | | PAINTED BASE | |
|------------------|-----------|--------------|------|--------------|------|
| | Materials | 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 2: MATERIALS OF THE CATIFA 53 WITH TRESTLE BASE.



| | CATIFA TRESTLE | | ALUMINIUM BASE | | BASE PAINTED | |
|---------------|----------------|--------|----------------|-------|--------------|--|
| | Materials | kg | % | kg | % | |
| Catifa 53 | Steel | 3.007 | 37% | 3.075 | 37% | |
| | PP | 2.724 | 33% | 2.736 | 33% | |
| | Aluminum | 2.400 | 29% | 2.441 | 29% | |
| | GEB015 | 0.029 | 0% | 0.029 | 0% | |
| | PE | 0.010 | 0% | - | - | |
| | Total | 8.169 | 100% | 8.281 | 100% | |
| Packaging x 1 | Cardboard | 3.5215 | 97% | 3.521 | 89% | |
| | PE | 0.0845 | 2% | 0.384 | 10% | |
| | Paper | 0.022 | 1% | 0.022 | 1% | |
| | Steel | 0.020 | 1% | 0.020 | 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 | 0.040 | 1% | 0.040 | 1% | |
| | Paper | 0.022 | 0% | 0.022 | 0% | |
| | Total | 6.543 | 100% | 6.543 | 100% | |

ENVIRONMENTAL INFORMATION

FUNCTIONAL UNIT

The functional unit considered is represented by 1 seat with a lifetime of 15 years.

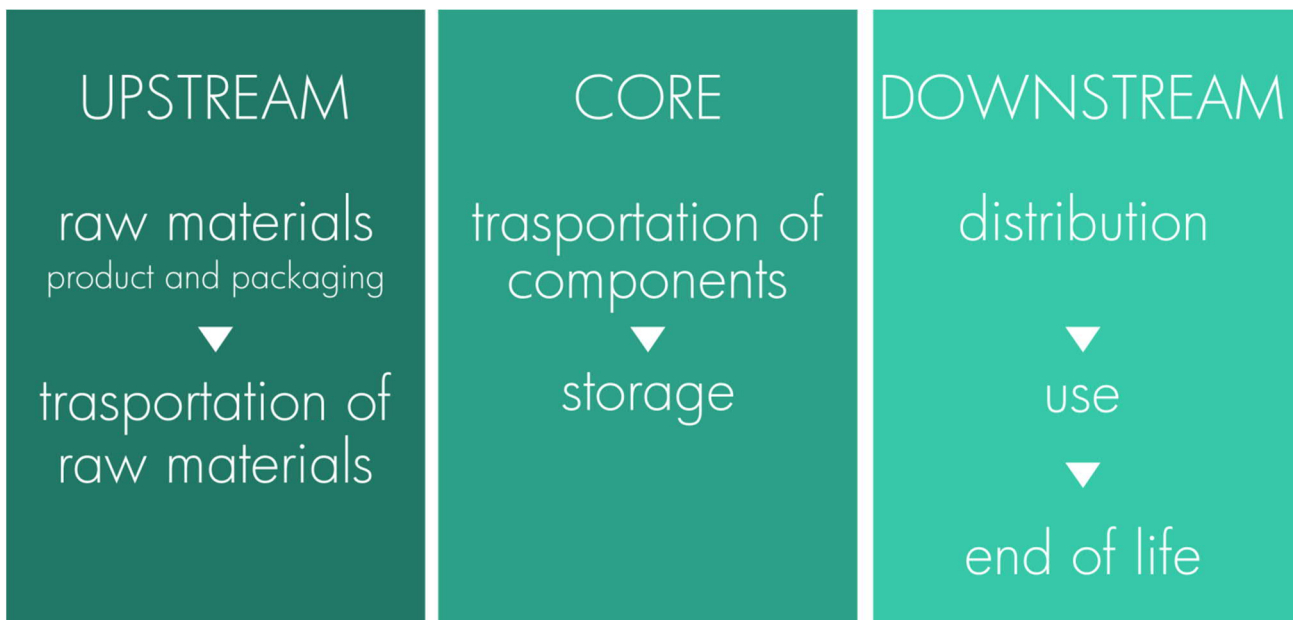
SYSTEM BOUNDARIES

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

Specifically, upstream processes consist of raw materials, their transport, production of the chair components, assembly and packaging.

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

Downstream processes include the distribution of the packed product, use phase and end of life stage of both product and packaging.



TIME BOUNDARIES

Primary data originate from Arper and refer to 2017. Secondary data originate from the ecoinvent v3.4 database (allocation, cut-off by classification) published in 2017.

GEOGRAPHICAL BOUNDARIES

Components and packaging materials are produced in Italy, except for the trestle, which are produced in Vietnam. 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.

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 consumption of the storehouse, 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 have been collected from Arper's suppliers, while generic data originate from the ecoinvent database v3.4.

Some ecoinvent v3.4 processes, such as powder coating, welding, extrusion of steel bars and injection moulding of plastic parts, have been adapted to the Italian situation (or Vietnamese in the case of the trestle base) changing the energy mix in order to make them more representative of the system studied. Electricity mixes were taken from the ecoinvent database.

The LCA calculation has been performed using the LCA software SimaPro 8.5.

The use of proxy data does not exceed the limit of 10% of the impact of the impact categories. All material inputs of the production process have been considered.

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

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Primary data have been used for the following components: polypropylene shell, legs, trays, clips, feet and stacking caps, data on chromium plating and painting processes of the 4 leg base, data about clips for the trestle.

For the packaging of Catifa 53, the information from the sales data of the year 2017 has been used: 90% of the Catifa 53 4 leg and 73% of the Catifa 53 trestle are packed in a 4 piece box packaging.

Primary data have been used for product storage, provided by the company responsible for the storage.

For the distribution phase sales data have been used considering a road transport (lorry > 32 t) and the distance between Arper's headquarters and the capital city of the exporting country. In case of transport by ship, a road transport to cover the distance from Arper's facility to the nearest port, transport by ship to the main port of the destination and a local transport of 300 km by road (truck 16-32 t) has been assumed.

The use phase consists of a consumption of 0.1 l of hot water and 0.8 g of soap. For soap, a solution with 5% alkylbenzene sulfonate is considered, while a consumption of 5.58 MJ of thermal energy is assumed to heat water.

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

IMPACT ASSESSMENT

Table 3 until table 10 show the environmental indicators of the Catifa 53 chair. Environmental indicators consist of 7 impact categories (global warming, acidification, photochemical smog, eutrophication, human toxicity, ecotoxicity and land use), material and energy resources (renewable and non renewable), consumption of water and waste. The indicators are broken down into upstream, core and downstream processes.

| TABLE 3: CATIFA 53 4 LEG, CHROMED, ENVIRONMENTAL INDICATORS | | Units | Total | Upstream | Core | Downstream |
|-------------------------------------------------------------|-----------------------------------|------------------------------------|-------|----------|-------|------------|
| Environmental Impact Categories | Global Warming | kg CO ₂ eq | 28.7 | 24.3 | 0.1 | 4.3 |
| | Acidification | kg SO ₂ eq | 0.125 | 0.108 | 0.001 | 0.016 |
| | Photochemical oxydation | g C ₂ H ₄ eq | 8.12 | 7.34 | 0.03 | 0.75 |
| | Eutrophication | kg PO ₄ ³⁻ | 0.049 | 0.041 | 0.000 | 0.008 |
| | Human toxicity | CTUh 10 ⁻⁵ | 3.87 | 3.69 | 0.00 | 0.18 |
| | Ecotoxicity | CTUe 10 ³ | 1.84 | 0.50 | 0.00 | 1.33 |
| | Land use | species.yr 10 ⁸ | 4.28 | 3.96 | 0.02 | 0.30 |
| Use of resources | Non-renewable resurces, materials | kg | 9.56 | 7.65 | 0.08 | 1.83 |
| | Non-renewable resurces, energy | kg | 13.4 | 12.6 | 0.1 | 0.8 |
| | Renewable resurces, materials | t | 140 | 134 | 1 | 6 |
| | Renewable resurces, energy | MJ | 46.1 | 44.7 | 0.2 | 1.1 |
| | Secondary resurces, materials | kg | - | - | - | - |
| | Secondary resurces, energy | kg | - | - | - | - |
| | Recovered energy | MJ | - | - | - | - |
| | Total amount of water * | m ³ | 140 | 134 | 1 | 6 |
| Direct amount of water used by the core process | l | 0.001 | 0.000 | 0.001 | 0.000 | |
| Wastes | Hazardous wastes | kg | 0.857 | 0.028 | 0.000 | 0.829 |
| | Radioactive wastes | kg | - | - | - | - |
| | Non-hazardous wastes | kg | 6.85 | 0.00 | 0.00 | 6.84 |

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

| TABLE 4: CATIFA 53 4 LEG, CHROMED, MATERIAL AND ENERGY RESOURCES | | Units | Total | Upstream | Core | Downstream |
|------------------------------------------------------------------|-------------------------------------------|-------|-------------|-------------|-------------|-------------|
| | Non-renewable resources, materials | kg | 9.56 | 7.65 | 0.08 | 1.83 |
| | Gravel | kg | 4.77 | 2.94 | 0.08 | 1.75 |
| | Iron | kg | 2.67 | 2.64 | 0.00 | 0.03 |
| | Calcite | kg | 1.38 | 1.34 | 0.00 | 0.04 |
| | Other* | kg | 0.73 | 0.72 | 0.00 | 0.01 |
| | Non-renewable resources, energy | kg | 13.4 | 12.6 | 0.1 | 0.8 |
| | Coal, hard | kg | 4.7 | 4.6 | 0.0 | 0.1 |
| | Oil, crude | kg | 4.7 | 4.2 | 0.0 | 0.5 |
| | Gas, natural/m ³ | kg | 2.9 | 2.8 | 0.0 | 0.1 |
| | Coal, brown | kg | 1.0 | 1.0 | 0.0 | 0.1 |
| | Other* | kg | 0.0 | 0.0 | 0.0 | 0.0 |
| Use of Resources | Renewable resources, materials | t | 140 | 134 | 1 | 6 |
| | Water, RoW | t | 42 | 41 | 0 | 0 |
| | Water, IT | t | 40 | 40 | 0 | 0 |
| | Water, CN | t | 14 | 14 | 0 | 0 |
| | Water, CH | t | 12 | 10 | 0 | 3 |
| | Water, FR | t | 10 | 8 | 0 | 1 |
| | Other* | t | 22 | 21 | 0 | 1 |
| | Renewable resources, energy | MJ | 46.1 | 44.7 | 0.2 | 1.1 |
| | Energy, potential, hydropower | MJ | 21.7 | 20.8 | 0.1 | 0.8 |
| | Energy, gross calorific value, in biomass | MJ | 18.4 | 18.1 | 0.0 | 0.2 |
| | Energy, kinetic | MJ | 3.9 | 3.8 | 0.0 | 0.1 |
| | Other* | MJ | 2.1 | 2.0 | 0.0 | 0.0 |

* Resources with a contribution lower than 5 %.

| TABLE 5: CATIFA 53 4 LEG, PAINTED, ENVIRONMENTAL INDICATORS | | Units | Total | Upstream | Core | Downstream |
|-------------------------------------------------------------|-----------------------------------|------------------------------------|-------|----------|-------|------------|
| Environmental Impact Categories | Global Warming | kg CO ₂ eq | 32.2 | 27.7 | 0.1 | 4.3 |
| | Acidification | kg SO ₂ eq | 0.168 | 0.151 | 0.001 | 0.016 |
| | Photochemical oxydation | g C ₂ H ₄ eq | 9.47 | 8.68 | 0.03 | 0.76 |
| | Eutrophication | kg PO ₄ ³⁻ | 0.055 | 0.046 | 0.000 | 0.008 |
| | Eutrophication | CTUh 10 ⁵ | 2.55 | 2.37 | 0.00 | 0.18 |
| | Human toxicity | CTUe 10 ³ | 1.72 | 0.39 | 0.00 | 1.33 |
| | Land use | species·yr 10 ⁸ | 4.56 | 4.23 | 0.02 | 0.30 |
| Use of resources | Non-renewable resurces, materials | kg | 10.5 | 8.6 | 0.1 | 1.8 |
| | Non-renewable resurces, energy | kg | 14.9 | 14.1 | 0.1 | 0.8 |
| | Renewable resurces, materials | t | 154 | 147 | 1 | 6 |
| | Renewable resurces, energy | MJ | 48.7 | 47.3 | 0.2 | 1.1 |
| | Secondary resurces, materials | kg | - | - | - | - |
| | Secondary resurces, energy | kg | - | - | - | - |
| | Recovered energy | MJ | - | - | - | - |
| | Total amount of water * | m ³ | 154 | 147 | 1 | 6 |
| Direct amount of water used by the core process | l | 0.001 | 0.000 | 0.001 | 0.000 | |
| Wastes | Hazardous wastes | kg | 0.861 | 0.031 | 0.000 | 0.829 |
| | Radioactive wastes | kg | - | - | - | - |
| | Non-hazardous wastes | kg | 6.87 | 0.00 | 0.00 | 6.87 |

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

| TABLE 6: CATIFA 53 4 LEG PAINTED, MATERIAL AND ENERGY RESOURCES | | Units | Total | Upstream | Core | Downstream |
|-----------------------------------------------------------------|-------------------------------------------|-----------|-------------|-------------|------------|------------|
| | Non-renewable resources, materials | kg | 10.5 | 8.6 | 0.1 | 1.8 |
| | Gravel | kg | 5.2 | 3.3 | 0.1 | 1.8 |
| | Iron | kg | 3.1 | 3.1 | 0.0 | 0.0 |
| | Calcite | kg | 1.4 | 1.3 | 0.0 | 0.0 |
| | Other* | kg | 0.9 | 0.9 | 0.0 | 0.0 |
| | Non-renewable resources, energy | kg | 14.9 | 14.1 | 0.1 | 0.8 |
| | Coal, hard | kg | 5.3 | 5.2 | 0.0 | 0.1 |
| | Oil, crude | kg | 4.9 | 4.4 | 0.0 | 0.5 |
| | Gas, natural/m ³ | kg | 3.5 | 3.4 | 0.0 | 0.1 |
| | Coal, brown | kg | 1.2 | 1.1 | 0.0 | 0.1 |
| | Other* | kg | 0.0 | 0.0 | 0.0 | 0.0 |
| Use of resources | Renewable resources, materials | t | 154 | 147 | 1 | 6 |
| | Water, RoW | t | 47 | 46 | 0 | 0 |
| | Water, IT | t | 42 | 41 | 0 | 0 |
| | Water, CN | t | 17 | 16 | 0 | 0 |
| | Water, CH | t | 13 | 10 | 0 | 3 |
| | Water, FR | t | 10 | 9 | 0 | 1 |
| | Other* | t | 26 | 24 | 0 | 1 |
| | Renewable resources, energy | MJ | 48.7 | 47.3 | 0.2 | 1.1 |
| | Energy, potential, hydropower | MJ | 23.3 | 22.3 | 0.1 | 0.8 |
| | Energy, gross calorific value, in biomass | MJ | 19.1 | 18.9 | 0.0 | 0.2 |
| | Energy, kinetic | MJ | 4.2 | 4.0 | 0.0 | 0.1 |
| | Other* | MJ | 2.1 | 2.1 | 0.0 | 0.0 |

* Resources with a contribution lower than 5 %.

| TABLE 7: CATIFA 53 TRESTLE, ALUMINUM, ENVIRONMENTAL INDICATORS | | Units | Total | Upstream | Core | Downstream |
|----------------------------------------------------------------|-----------------------------------|------------------------------------|-------|----------|-------|------------|
| Environmental Impact Categories | Global Warming | kg CO ₂ eq | 48.9 | 43.8 | 0.2 | 4.9 |
| | Acidification | kg SO ₂ eq | 0.253 | 0.229 | 0.001 | 0.024 |
| | Photochemical oxydation | g C ₂ H ₄ eq | 14.8 | 13.7 | 0.0 | 1.1 |
| | Eutrophication | kg PO ₄ ³⁻ | 0.082 | 0.072 | 0.000 | 0.010 |
| | Human toxicity | CTUh 10 ⁻⁵ | 3.71 | 3.50 | 0.00 | 0.21 |
| | Ecotoxicity | CTUe 10 ³ | 5.21 | 3.65 | 0.00 | 1.55 |
| | Land use | species.yr 10 ⁸ | 7.16 | 6.69 | 0.03 | 0.44 |
| Use of resources | Non-renewable resurces, materials | kg | 15.3 | 12.4 | 0.1 | 2.8 |
| | Non-renewable resurces, energy | kg | 21.9 | 20.8 | 0.1 | 1.1 |
| | Renewable resurces, materials | t | 292 | 283 | 1 | 8 |
| | Renewable resurces, energy | MJ | 76.0 | 74.2 | 0.3 | 1.6 |
| | Secondary resurces, materials | kg | - | - | - | - |
| | Secondary resurces, energy | kg | - | - | - | - |
| | Recovered energy | MJ | - | - | - | - |
| | Total amount of water * | m ³ | 292 | 283 | 1 | 8 |
| Direct amount of water used by the core process | l | 0.001 | 0.000 | 0.001 | 0.000 | |
| Wastes | Hazardous wastes | kg | 1.47 | 0.15 | 0.00 | 1.32 |
| | Radioactive wastes | kg | - | - | - | - |
| | Non-hazardous wastes | kg | 10.5 | 0.3 | 0.0 | 10.2 |

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

| TABLE 8: CATIFA 53 TRESTLE, ALUMINUM, MATERIAL AND ENERGY RESOURCES | | Units | Total | Upstream | Core | Downstream |
|---------------------------------------------------------------------|-------------------------------------------|-----------|-------------|-------------|------------|------------|
| Use of resources | Non-renewable resources, materials | kg | 15.3 | 12.4 | 0.1 | 2.8 |
| | Gravel | kg | 8.5 | 5.8 | 0.1 | 2.7 |
| | Iron | kg | 3.3 | 3.2 | 0.0 | 0.0 |
| | Calcite | kg | 1.7 | 1.7 | 0.0 | 0.1 |
| | Other* | kg | 1.8 | 1.7 | 0.0 | 0.0 |
| | Non-renewable resources, energy | kg | 21.9 | 20.8 | 0.1 | 1.1 |
| | Coal, hard | kg | 9.7 | 9.6 | 0.0 | 0.1 |
| | Oil, crude | kg | 5.8 | 5.1 | 0.0 | 0.7 |
| | Gas, natural/m3 | kg | 4.2 | 4.1 | 0.0 | 0.2 |
| | Coal, brown | kg | 2.1 | 2.0 | 0.0 | 0.1 |
| | Other* | kg | 0.1 | 0.1 | 0.0 | 0.0 |
| | Renewable resources, materials | t | 292 | 283 | 1 | 8 |
| | Water, RoW | t | 111 | 110 | 0 | 1 |
| | Water , CN | t | 41 | 40 | 0 | 1 |
| | Water , IT | t | 40 | 40 | 1 | 0 |
| | Water , RU | t | 29 | 29 | 0 | 0 |
| | Other* | t | 71 | 64 | 0 | 7 |
| | Renewable resources, energy | MJ | 76.0 | 74.2 | 0.3 | 1.6 |
| | Energy, potential, hydropower | MJ | 41.6 | 40.3 | 0.2 | 1.1 |
| | Energy, gross calorific value, in biomass | MJ | 27.7 | 27.4 | 0.0 | 0.3 |
| Energy, kinetic | MJ | 4.5 | 4.3 | 0.0 | 0.1 | |
| Other* | MJ | 2.2 | 2.1 | 0.0 | 0.0 | |

* Resources with a contribution lower than 5 %.

| TABLE 9: CATIFA 53 TRESTLE, PAINTED, ENVIRONMENTAL INDICATORS | | Units | Total | Upstream | Core | Downstream |
|---------------------------------------------------------------|-------------------------------------------------|------------------------------------|-------|----------|-------|------------|
| Environmental Impact Categories | Global Warming | kg CO ₂ eq | 50.9 | 45.7 | 0.2 | 5.0 |
| | Acidification | kg SO ₂ eq | 0.280 | 0.255 | 0.001 | 0.024 |
| | Photochemical oxydation | g C ₂ H ₄ eq | 15.4 | 14.3 | 0.0 | 1.1 |
| | Eutrophication | kg PO ₄ ³⁻ | 0.084 | 0.074 | 0.000 | 0.010 |
| | Eutrophication | CTUh 10 ⁻⁵ | 3.77 | 3.55 | 0.00 | 0.21 |
| | Human toxicity | CTUe 10 ³ | 5.23 | 3.66 | 0.00 | 1.56 |
| | Land use | species.yr 10 ⁻⁸ | 7.33 | 6.85 | 0.03 | 0.45 |
| Use of resources | Non-renewable resurces, materials | kg | 15.7 | 12.8 | 0.1 | 2.8 |
| | Non-renewable resurces, energy | kg | 22.8 | 21.6 | 0.1 | 1.1 |
| | Renewable resurces, materials | t | 298 | 289 | 1 | 8 |
| | Renewable resurces, energy | MJ | 78.1 | 76.2 | 0.3 | 1.6 |
| | Secondary resurces, materials | kg | - | - | - | - |
| | Secondary resurces, energy | kg | - | - | - | - |
| | Recovered energy | MJ | - | - | - | - |
| | Total amount of water * | m ³ | 298 | 289 | 1 | 8 |
| | Direct amount of water used by the core process | l | 0.001 | 0.000 | 0.001 | 0.000 |
| Wastes | Hazardous wastes | kg | 1.48 | 0.15 | 0.00 | 1.33 |
| | Radioactive wastes | kg | - | - | - | - |
| | Non-hazardous wastes | kg | 10.7 | 0.3 | 0.0 | 10.3 |

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

| TABLE 10: CATIFA 53 TRESTLE, PAINTED, MATERIAL AND ENERGY RESOURCES | | Units | Total | Upstream | Core | Downstream |
|---------------------------------------------------------------------|-------------------------------------------|-----------|-------------|-------------|------------|------------|
| Use of resources | Non-renewable resources, materials | kg | 15.7 | 12.8 | 0.1 | 2.8 |
| | Gravel | kg | 8.7 | 5.9 | 0.1 | 2.7 |
| | Iron | kg | 3.3 | 3.3 | 0.0 | 0.0 |
| | Calcite | kg | 1.8 | 1.7 | 0.0 | 0.1 |
| | Other* | kg | 1.9 | 1.9 | 0.0 | 0.0 |
| | Non-renewable resources, energy | kg | 22.8 | 21.6 | 0.1 | 1.1 |
| | Coal, hard | kg | 9.9 | 9.8 | 0.0 | 0.1 |
| | Oil, crude | kg | 6.0 | 5.2 | 0.0 | 0.7 |
| | Gas, natural/m3 | kg | 4.6 | 4.5 | 0.0 | 0.2 |
| | Coal, brown | kg | 2.1 | 2.1 | 0.0 | 0.1 |
| | Other* | kg | 0.1 | 0.1 | 0.0 | 0.0 |
| | Renewable resources, materials | t | 298 | 289 | 1 | 8 |
| | Water, RoW | t | 112 | 111 | 0 | 1 |
| | Water, IT | t | 42 | 42 | 1 | 0 |
| | Water, CN | t | 41 | 40 | 0 | 1 |
| | Water, RU | t | 29 | 29 | 0 | 0 |
| | Other* | t | 74 | 67 | 0 | 7 |
| | Renewable resources, energy | MJ | 78.1 | 76.2 | 0.3 | 1.6 |
| | Energy, potential, hydropower | MJ | 42.7 | 41.4 | 0.2 | 1.1 |
| | Energy, gross calorific value, in biomass | MJ | 28.4 | 28.0 | 0.0 | 0.3 |
| Energy, kinetic | MJ | 4.7 | 4.6 | 0.0 | 0.1 | |
| Other* | MJ | 2.3 | 2.2 | 0.0 | 0.0 | |

* Resources with a contribution lower than 5 %.

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 leg and trestle) or aluminum (trestle) is GECA certified, license number: ARP-2017, licensee since: 02 July 2009, license expiry date: 07 February 2020.



CONTACT AND OTHER INFORMATION

ARPER CONTACT INFORMATION

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

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CERTIFICATION AND CERTIFICATION BODY INFORMATION

Registration N°: S-P-01495
Publishing date: 2019-01-18
Document valid until: 2021-12-13
Reference year: 2017
Geographic area validity: Global

PCR 2009:02, version 2.0 (UN CPC 3811, Seats), PCR review conducted by Leo Breedveld, available on the website of the International EPD Consortium (IEC): www.environdec.com

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

■ EPD process certification □ EPD validation

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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).

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.

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