

# Environmental Product Declaration

 **EPD**<sup>®</sup>  
THE INTERNATIONAL EPD<sup>®</sup> SYSTEM

## Elephantino **KRISTALIA**



EPD programme: 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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# KRISTALIA

We are an Italian company that has been producing furniture and accessories with a light and essential touch for homes and public spaces since 1994.

Being Kristalia has required ideas, time and, above all, values. Our commitment and design promise is that the same furniture, both in function and aesthetics, can furnish homes, restaurants and hotels, indoor and outdoor spaces.

Our four pillars: **Originality** (Our way), **Everyday life** (We live in the moment), **Informality** (Casual is a way of life) and **Quality** (We think about the future).

Quality is for us a synonym for sustainability.

Designing furniture with excellent materials, designed to last and produce it mainly in Italy with a short supply chain, is a way of respecting the future and resources, as well as the people who choose us.

With the goal of creating products that last, we set very high quality standards and operate with awareness, starting with design. We carefully select materials and suppliers, control consumption and emissions, and produce the energy we consume, with photovoltaic panels.

Kristalia has, in fact, decided to invest in itself as well, in terms of sustainability, starting with its headquarters, created in 2014, following an intervention on a decommissioned industrial area and a reclamation of the land and structures it houses.

This is a working environment which often opens its doors to the community with dedicated events, that absorbs and at the same time produces the energy it needs and where human energy also promises a combined response between creativity and efficiency.



h 25.000/YEAR  
 □ 6.000/YEAR

to do all this we drink

☕ 160/DAY

20%  
OUTDOOR

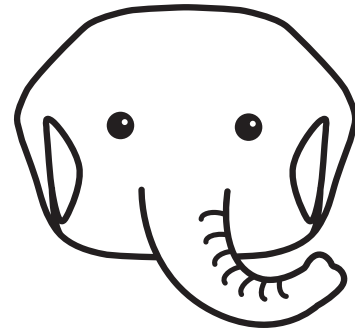


45%  
HOME

35%  
CONTRACT



# Elephantino



## PRODUCT DESCRIPTION

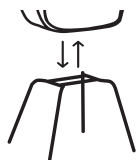
The first chair with a structure made of post-consumer recycled and recyclable plastic, Elephantino is the latest addition to the Elephant collection, a Kristalia bestseller designed by Eva Paster and Michael Geldmacher. The polypropylene structure with armrests recalls that of the armchair, echoing the characteristic reinforced ribbing of the hide version, inspired by the backbone of an elephant. Both versions are available with four legs, a wooden base, slide frame base, swivel trestle base or with castors, or with five spokes with castors. The chair with four legs or a slide frame base is also suitable for outdoor use: in this case, the structure can be provided with a hole for water drainage. Interesting shades, bright yet desaturated: a feature resulting from the special composition of the plastic.



#2 types of shell



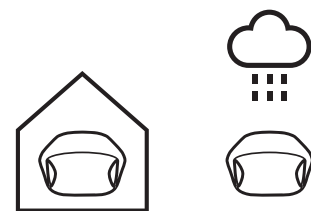
#5 exclusive shades



Easily disassemblable



ENTIRELY FROM  
POST-CONSUMER  
RECYCLED PROPYLENE

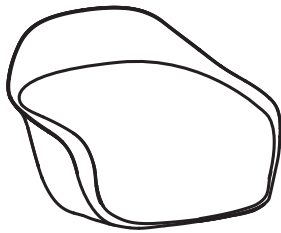
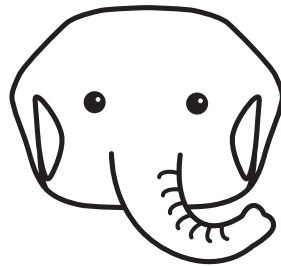


Indoor + Outdoor

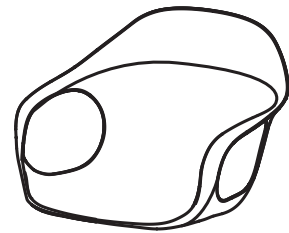


Long lasting

# Elephantino



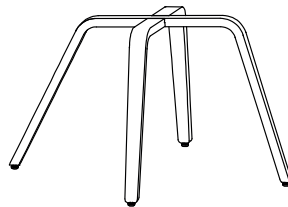
**Tub seat**



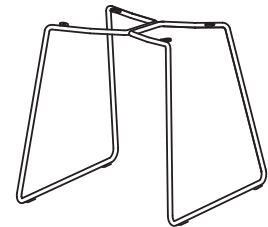
**Tub seat with holes**



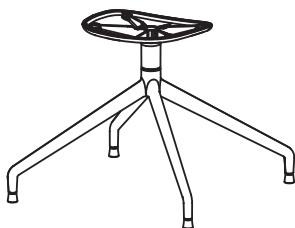
**Four legs**



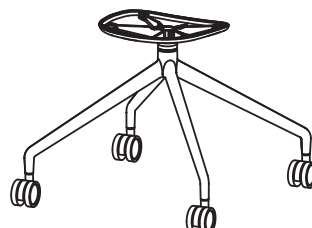
**Wooden base**



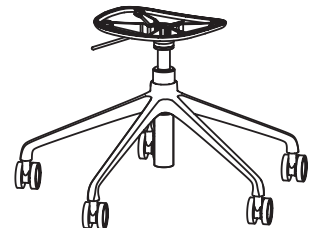
**Sled base**



**Swivel trestle**



**Trestle with wheels**



**5-spoke base**

## TABLE OF MATERIALS FOR THE DIFFERENT VERSIONS

## Tube seat version with the six variants

	Four legs		Sled base		Wooden base		Swivel trestle		Trestle with wheels		5-spoke base	
	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%
PP	4,24	63,5%	4,24	52,2%	4,24	66,6%	4,25	52,5%	4,24	50,3%	4,24	43,4%
Brass	0,01	0,2%	0,01	0,1%	0,01	0,2%	0,01	0,1%	0,01	0,1%	0,01	0,1%
Painted wood	0,00	0,0%	0,00	0,0%	2,10	33,0%	0,00	0,0%	0,00	0,0%	0,00	0,0%
Paint	0,14	2,1%	0,14	1,7%	0,00	0,0%	0,22	2,7%	0,22	2,6%	0,22	2,3%
PA6	0,00	0,0%	0,02	0,2%	0,00	0,0%	0,00	0,0%	0,25	2,9%	0,31	3,2%
Steel	2,26	33,8%	3,72	45,8%	0,01	0,2%	0,02	0,2%	0,22	2,6%	1,66	17,0%
PE	0,03	0,4%	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,00	0,0%
Aluminium	0,00	0,0%	0,00	0,0%	0,00	0,0%	3,60	44,4%	3,40	40,3%	3,20	32,8%
Rubber	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,10	1,2%	0,13	1,3%
<b>Chair total</b>	<b>6,68</b>	<b>100%</b>	<b>8,13</b>	<b>100%</b>	<b>6,37</b>	<b>100%</b>	<b>8,10</b>	<b>100%</b>	<b>8,44</b>	<b>100%</b>	<b>9,77</b>	<b>100%</b>
<b>Packaging (kg)</b>												
Cardboard			2,5						92,8%			
Paper			0,005						0,2%			
LDPE			0,19						7,1%			
<b>Packaging total</b>			<b>2,70</b>						<b>100%</b>			
<b>Weight (kg)</b>												
<b>Chair and packaging</b>	<b>4,24</b>		<b>10,82</b>		<b>9,07</b>		<b>10,80</b>		<b>11,13</b>		<b>10,96</b>	

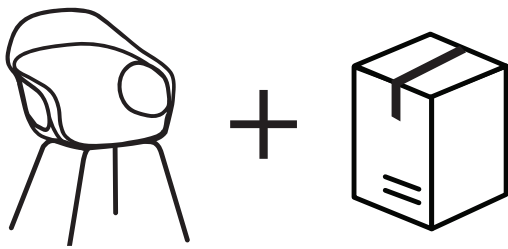
## Tub seat with holes version with the six variants

	Four legs		Sled base		Wooden base		Swivel trestle		Trestle with wheels		5-spoke base	
	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%	Weight (kg)	%
PP	3,91	61,6%	3,91	50,1%	3,91	64,8%	3,92	50,5%	3,91	48,2%	3,91	41,4%
Brass	0,01	0,2%	0,01	0,2%	0,01	0,2%	0,01	0,2%	0,01	0,1%	0,01	0,1%
Painted wood	0,00	0,0%	0,00	0,0%	2,10	34,8%	0,00	0,0%	0,00	0,0%	0,00	0,0%
Paint	0,14	2,2%	0,14	1,8%	0,00	0,0%	0,22	2,8%	0,22	2,7%	0,22	2,3%
PA6	0,00	0,0%	0,02	0,2%	0,00	0,0%	0,00	0,0%	0,25	3,1%	0,31	3,3%
Steel	2,26	35,6%	3,72	47,7%	0,01	0,2%	0,02	0,2%	0,22	2,7%	1,66	17,6%
PE	0,03	0,4%	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,00	0,0%
Aluminium	0,00	0,0%	0,00	0,0%	0,00	0,0%	3,60	46,3%	3,40	41,9%	3,20	33,9%
Rubber	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,00	0,0%	0,10	1,2%	0,13	1,3%
<b>Chair total</b>	<b>6,35</b>	<b>100%</b>	<b>7,80</b>	<b>100%</b>	<b>6,04</b>	<b>100%</b>	<b>7,77</b>	<b>100%</b>	<b>8,11</b>	<b>100%</b>	<b>9,44</b>	<b>100%</b>
<b>Packaging (kg)</b>												
Cardboard			2,5						92,8%			
Paper			0,005						0,2%			
LDPE			0,19						7,1%			
<b>Packaging total</b>			<b>2,70</b>						<b>100%</b>			
<b>Weight (kg)</b>												
<b>Chair and packaging</b>	<b>9,04</b>		<b>10,49</b>		<b>8,74</b>		<b>10,47</b>		<b>10,80</b>		<b>10,63</b>	

# Environmental LCA

## DECLARED UNIT

The declared unit for this study is one seat with its packaging, the reference service life is assumed to be 15 years.



## TIME FRAME

Primary data collected by Kristalia are from the reference year 2022. Secondary data are from the ecoinvent v3.8 allocation, cut-off by classification database, published in 2021. The residual energy mix for Italy is from the reference year 2021.

## GEOGRAPHICAL BOUNDARIES

Components and packaging are produced in Italy. Elephantino is distributed both in Italy and abroad, distribution and end of life scenarios are based on the countries in which the chair is sold. In this evaluation, at least 90% of the units sold in the reference year are considered.

## SYSTEM BOUNDARIES

The system boundaries are “from cradle to grave”, so this study includes upstream, core and downstream phases of the Elephantino life cycle.

## LIFE CYCLE BOUNDARIES

The processes considered in this study are those directly connected with the production of the chair and its packaging, while the infrastructures are not included in the system boundaries. The processes from ecoinvent database contain the impacts related to the construction and operation of infrastructure and machinery.

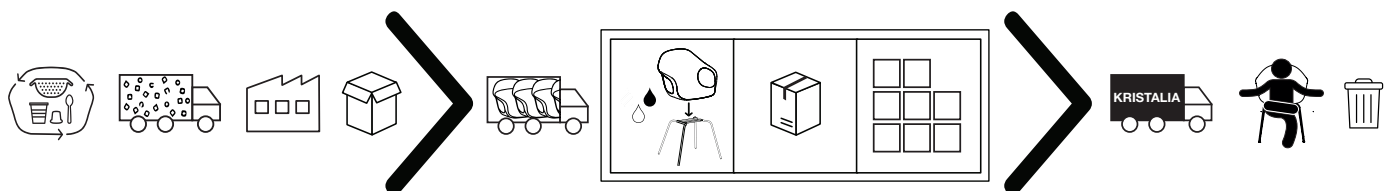
## ALLOCATION RULES

Raw material inputs include extraction and production processes. Recycled material inputs only include the impacts related to the recycling process.

For product end-of-life and packaging, the “cut-off” approach is used: the materials sent to recycling do not carry environmental burdens or benefits, since it is assumed that they belong to a new life cycle.

Energy consumption and waste generated by the powder coating process are allocated only to the coated version of the chair. The economic allocation criterion is applied, which is the ratio between the unit price and the total revenue of Kristalia in the reference year. Following the same criterion, the consumption and waste generated by the plant for the assembly, packaging and storage of the product are allocated on the different versions.

## SYSTEM BOUNDARIES



### Upstream

Upstream processes are: production and transport of raw materials and the production of components by suppliers.

### Core

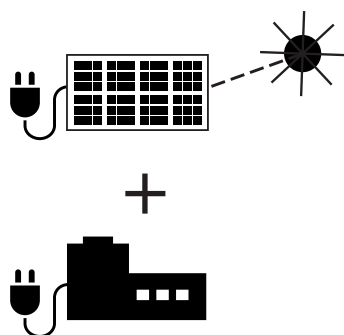
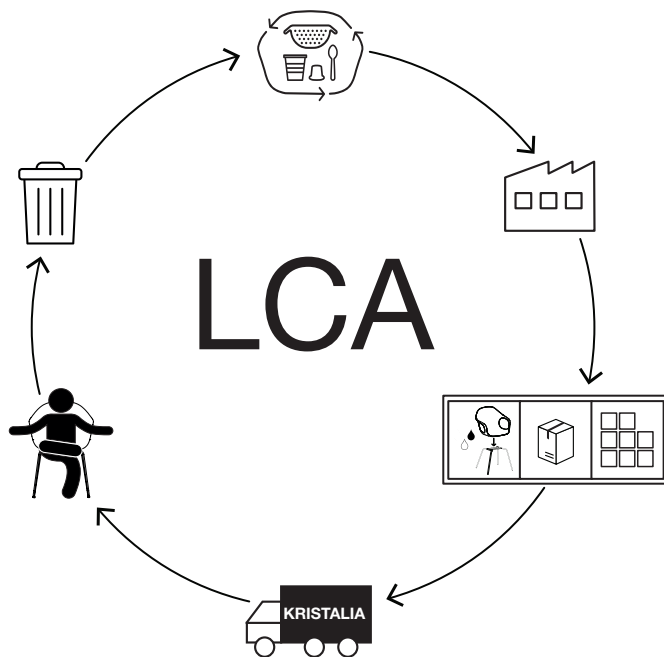
Core processes are: transport of components and materials from suppliers to Kristalia, powder coating of the steel and aluminium frames, assembly and packaging of the chairs, energy and water consumption of the plant as well as the produced waste.

### Downstream

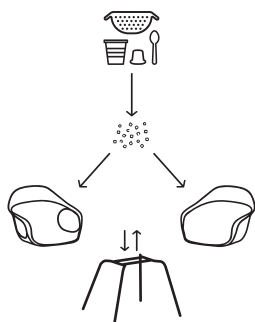
Downstream processes are: product distribution, use phase and end of life of the product and its packaging.

## INVENTORY

The LCA study is based on primary data collected by Kristalia and its suppliers for the weight of components and characteristics of materials. Secondary data are from the ecoinvent v3.8 database, and LCA calculations were performed using SimaPro 9.4. All material inputs to the manufacturing process have been evaluated. Proxy data are used to a limited extent and their impact has been verified to be no more than 10% of the total for the main indicators (Annex I for the impact analysis of proxy).



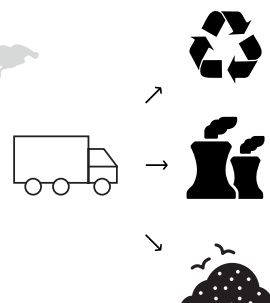
The electricity consumption of Kristalia and its direct suppliers is represented by the Italian national residual mix of 2021. The share of energy produced by the photovoltaic system installed on the roof of Kristalia's headquarters was also considered.



The energy consumption and weights of recycled polypropylene seats and steel frames (four legs and sled base) were reported by suppliers; the production process of recycled polypropylene was adapted from ecoinvent data. Die-cast aluminum frames (trestle and spokes) were modeled with ecoinvent processes based on weights communicated by Kristalia.



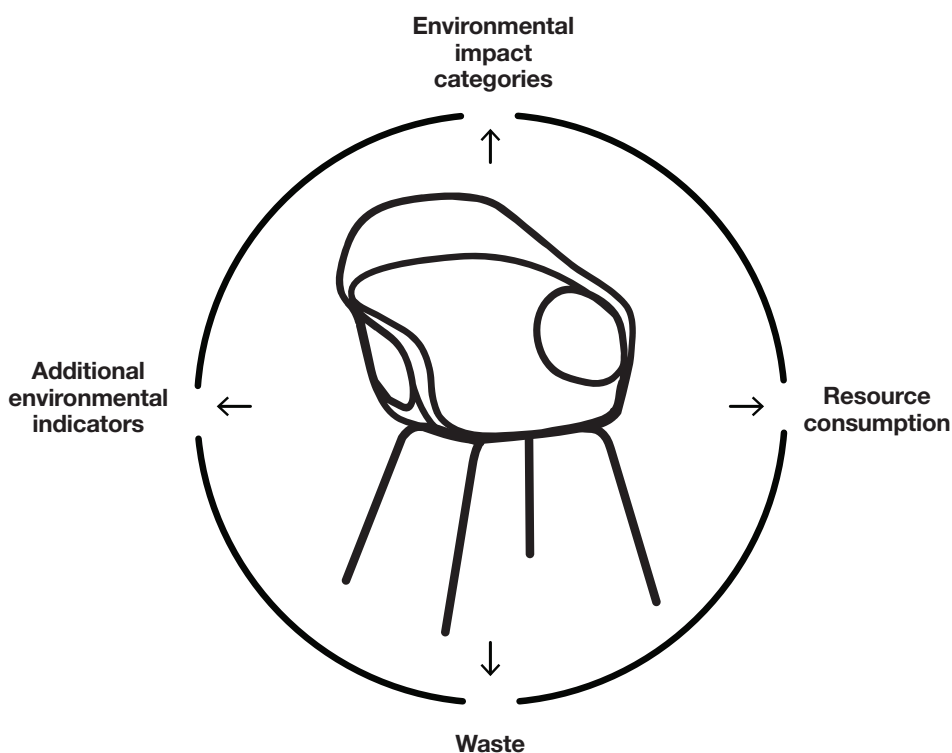
The modelling of product distribution is based on sales, land transport considers the distance between Kristalia's headquarters and the capital of the destination country. Sea transport considers transportation by truck to the port of Venice and from there by ship to the port of the destination country. In both cases, land transport of 300 km is considered to represent local distribution in the country of destination. For all land transport, the use of a 16-32 t truck was assumed, and for sea transport, container ship is assumed.



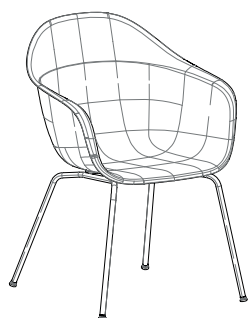
End-of-life scenarios for the product and its packaging are based on the countries where the product is sold using national waste treatment statistics; for waste transport to the treatment site, a transport of 100 km (16-32 t truck) was assumed.

## ENVIRONMENTAL IMPACT ASSESSMENT

The evaluation of environmental performance is carried out according to the method described in the PCR 2009:02 v3.0 – Seats comprising 10 main environmental impact categories: global warming potential (total, fossil fuel, biogenic and land use change), acidification, eutrophication, photochemical oxidant formation, abiotic depletion-materials, abiotic depletion-fossil fuels and water use. Additional indicators are related to the consumption of material and energy resources (renewable and non-renewable), fresh-water consumption, waste production, ecotoxicity, land use and human toxicity.







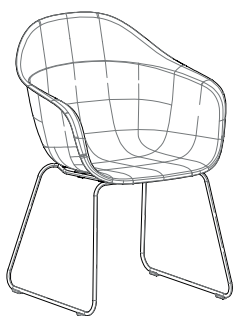
# Elephantino four legs

	Impact category	Unit	Total	Upstream	Core	Downstream
Environmental impact categories	Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	2.79E+01	1.77E+01	4.60E+00	5.59E+00
	Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	2.71E+01	1.78E+01	4.51E+00	4.77E+00
	Global warming (GWP100a)_biogenic	kg CO <sub>2</sub> eq	7.50E-01	-1.58E-01	9.00E-02	8.18E-01
	Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	5.00E-02	4.84E-02	7.64E-04	8.50E-04
	Acidification (fate not incl.)	kg SO <sub>2</sub> eq	1.06E-01	8.28E-02	1.17E-02	1.15E-02
	Eutrophication	kg PO <sub>4</sub> <sup>3-</sup>	4.02E-02	3.34E-02	2.81E-03	3.97E-03
	Photochemical oxidant formation	kg NMVOC eq	8.26E-02	6.09E-02	8.52E-03	1.32E-02
	Abiotic depletion	kg Sb eq	2.98E-04	2.75E-04	1.58E-05	7.32E-06
	Abiotic depletion (fossil fuels)	MJ	3.17E+02	2.25E+02	5.67E+01	3.55E+01
	Water use	m <sup>3</sup> eq	8.88E+00	7.52E+00	1.26E+00	9.83E-02
Resource consumption	Energy resources, renewable	MJ	1.07E+01	4.32E+00	5.93E+00	4.82E-01
	Raw materials resources, renewable	MJ	4.31E+01	4.31E+01	0.00E+00	0.00E+00
	Total resources, renewable	MJ	5.38E+01	4.74E+01	5.93E+00	4.82E-01
	Energy resources, non renewable	MJ	1.83E+02	7.73E+01	6.70E+01	3.88E+01
	Raw materials resources, non renewable	MJ	1.91E+02	1.91E+02	0.00E+00	0.00E+00
	Total resources, non renewable	MJ	3.74E+02	2.69E+02	6.70E+01	3.88E+01
	Total amount of water	m <sup>3</sup>	2.51E-01	2.12E-01	3.23E-02	6.60E-03
Waste	Hazardous waste	kg	1.37E-01	1.12E-01	5.73E-03	1.93E-02
	Non-Hazardous waste	kg	7.80E+00	5.56E+00	2.49E-01	1.98E+00
	Radioactive waste	kg	9.68E-04	6.53E-04	1.12E-04	2.03E-04
Additional environmental indicators	Human toxicity, cancer	cases	1.10E-05	1.07E-05	1.32E-07	1.36E-07
	Human toxicity, non-cancer	cases	5.64E-06	4.81E-06	3.46E-07	4.91E-07
	Freshwater ecotoxicity	PAF.m3.day	3.34E+05	3.04E+05	2.02E+04	1.03E+04
	Land use	species.yr	1.79E-08	1.68E-08	3.66E-10	7.26E-10

Characterization results for Elephantino with steel legs.

	Gross weights (kg)	LHV (MJ/kg)	Total (MJ)	Upstream (MJ)	Core (MJ)	Downstream (MJ)	
Use of resources	Non-renewable resources, materials	4,27	191,21	191,21	-	-	
	PP	4,24	44,80	189,95	189,95	-	-
	PE	0,03	44,80	1,25	1,25	-	-
	Renewable resources, materials	2,51		43,07	43,07	-	-
	Paper	0,005	14,9	0,07	0,07	-	-
	Cardboard	2,5	17,2	43,00	43,00	-	-

Material resource inventory for Elephantino four legs.



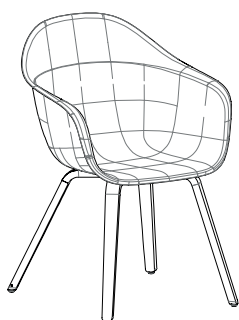
# Elephantino sled base

	Impact category	Unit	Total	Upstream	Core	Downstream
Environmental impact categories	Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	3.22E+01	2.11E+01	5.21E+00	5.88E+00
	Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	3.14E+01	2.12E+01	5.11E+00	5.06E+00
	Global warming (GWP100a)_biogenic	kg CO <sub>2</sub> eq	7.92E-01	-1.29E-01	1.02E-01	8.19E-01
	Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	6.26E-02	6.08E-02	8.66E-04	9.73E-04
	Acidification (fate not incl.)	kg SO <sub>2</sub> eq	1.22E-01	9.59E-02	1.32E-02	1.32E-02
	Eutrophication	kg PO <sub>4</sub> <sup>3-</sup>	4.75E-02	4.00E-02	3.19E-03	4.25E-03
	Photochemical oxidant formation	kg NMVOC eq	1.00E-01	7.56E-02	9.65E-03	1.50E-02
	Abiotic depletion	kg Sb eq	3.43E-04	3.17E-04	1.80E-05	8.36E-06
	Abiotic depletion (fossil fuels)	MJ	3.62E+02	2.58E+02	6.43E+01	4.00E+01
	Water use	m <sup>3</sup> eq	1.05E+01	8.93E+00	1.43E+00	1.11E-01
Resource consumption	Energy resources, renewable	MJ	1.50E+01	7.76E+00	6.73E+00	5.46E-01
	Raw materials resources, renewable	MJ	4.31E+01	4.31E+01	0.00E+00	0.00E+00
	Total resources, renewable	MJ	5.81E+01	5.08E+01	6.73E+00	5.46E-01
	Energy resources, non renewable	MJ	2.35E+02	1.15E+02	7.59E+01	4.37E+01
	Raw materials resources, non renewable	MJ	1.90E+02	1.90E+02	0.00E+00	0.00E+00
	Total resources, non renewable	MJ	4.26E+02	3.06E+02	7.59E+01	4.37E+01
	Total amount of water	m <sup>3</sup>	2.93E-01	2.49E-01	3.66E-02	7.36E-03
Waste	Hazardous waste	kg	1.52E-01	1.26E-01	6.50E-03	1.96E-02
	Non-Hazardous waste	kg	9.67E+00	7.13E+00	2.81E-01	2.26E+00
	Radioactive waste	kg	1.10E-03	7.39E-04	1.27E-04	2.35E-04
Additional environmental indicators	Human toxicity, cancer	cases	1.72E-05	1.69E-05	1.49E-07	1.53E-07
	Human toxicity, non-cancer	cases	6.88E-06	5.96E-06	3.92E-07	5.28E-07
	Freshwater ecotoxicity	PAF.m3.day	3.83E+05	3.49E+05	2.29E+04	1.13E+04
	Land use	species.yr	1.88E-08	1.76E-08	4.14E-10	8.36E-10

Characterization results for Elephantino with steel sled.

	Gross weights (kg)	LHV (MJ/kg)	Total (MJ)	Upstream (MJ)	Core (MJ)	Downstream (MJ)
Use of resources	Non-renewable resources, materials	4,26	190,56	190,56	-	-
	PP	4,24	44,80	189,95	189,95	-
	PA 6	0,02	30,50	0,61	0,61	-
	Renewable resources, materials	2,51		43,07	43,07	-
	Paper	0,005	14,9	0,07	0,07	-
	Cardboard	2,5	17,2	43,00	43,00	-

Material resource inventory for Elephantino with steel sled.



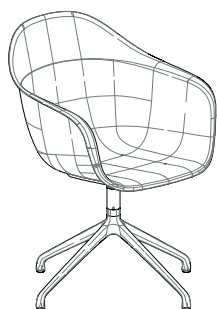
# Elephantino wooden base

	Impact category	Unit	Total	Upstream	Core	Downstream
Environmental impact categories	Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	2.44E+01	7.46E+00	5.56E+00	1.13E+01
	Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	2.31E+01	1.30E+01	5.40E+00	4.70E+00
	Global warming (GWP100a)_biogenic	kg CO <sub>2</sub> eq	1.28E+00	-5.53E+00	1.66E-01	6.65E+00
	Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	3.11E-02	2.95E-02	7.70E-04	8.27E-04
	Acidification (fate not incl.)	kg SO <sub>2</sub> eq	9.11E-02	6.20E-02	1.77E-02	1.14E-02
	Eutrophication	kg PO <sub>4</sub> <sup>3-</sup>	3.37E-02	2.49E-02	4.43E-03	4.39E-03
	Photochemical oxidant formation	kg NMVOC eq	6.70E-02	4.20E-02	1.17E-02	1.32E-02
	Abiotic depletion	kg Sb eq	2.77E-04	2.51E-04	1.94E-05	7.14E-06
	Abiotic depletion (fossil fuels)	MJ	2.84E+02	1.75E+02	7.44E+01	3.47E+01
	Water use	m <sup>3</sup> eq	7.30E+00	4.76E+00	2.44E+00	9.77E-02
Resource consumption	Energy resources, renewable	MJ	3.27E+01	2.10E+01	1.12E+01	4.73E-01
	Raw materials resources, renewable	MJ	8.19E+01	8.19E+01	0.00E+00	0.00E+00
	Total resources, renewable	MJ	1.15E+02	1.03E+02	1.12E+01	4.73E-01
	Energy resources, non renewable	MJ	1.53E+02	2.49E+01	9.04E+01	3.79E+01
	Raw materials resources, non renewable	MJ	1.90E+02	1.90E+02	0.00E+00	0.00E+00
	Total resources, non renewable	MJ	3.43E+02	2.15E+02	9.04E+01	3.79E+01
	Total amount of water	m <sup>3</sup>	2.28E-01	1.58E-01	6.20E-02	7.55E-03
Waste	Hazardous waste	kg	1.24E-01	9.53E-02	5.40E-03	2.34E-02
	Non-Hazardous waste	kg	5.78E+00	3.57E+00	2.86E-01	1.93E+00
	Radioactive waste	kg	9.74E-04	5.90E-04	1.86E-04	1.97E-04
Additional environmental indicators	Human toxicity, cancer	cases	1.58E-06	1.27E-06	1.76E-07	1.37E-07
	Human toxicity, non-cancer	cases	4.19E-06	3.19E-06	5.03E-07	4.96E-07
	Freshwater ecotoxicity	PAF.m3.day	2.78E+05	2.41E+05	2.64E+04	1.02E+04
	Land use	species.yr	3.99E-08	3.87E-08	5.06E-10	7.05E-10

Characterization results for Elephantino with wooden legs.

	Gross weights (kg)	LHV (MJ/kg)	Total (MJ)	Upstream (MJ)	Core (MJ)	Downstream (MJ)
Use of resources	Non-renewable resources, materials	4,24	189,95	189,95	-	-
	PP	4,24	44,80	189,95	189,95	-
	Renewable resources, materials	4,61		81,92	81,92	-
	Paper	0,005	14,9	0,07	0,07	-
	Cardboard	2,5	17,2	43,00	43,00	-
	Wood	2,10	18,5	38,85	38,85	-

Material resource inventory for Elephantino with wooden legs.



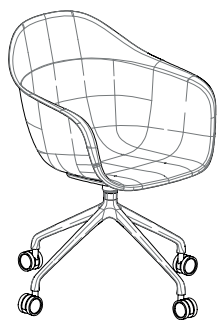
# Elephantino swivel trestle

	Impact category	Unit	Total	Upstream	Core	Downstream
Environmental impact categories	Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	5.61E+01	4.16E+01	8.61E+00	5.87E+00
	Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	5.47E+01	4.12E+01	8.44E+00	5.05E+00
	Global warming (GWP100a)_biogenic	kg CO <sub>2</sub> eq	1.28E+00	2.94E-01	1.71E-01	8.19E-01
	Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	1.02E-01	1.00E-01	1.40E-03	9.71E-04
	Acidification (fate not incl.)	kg SO <sub>2</sub> eq	2.61E-01	2.26E-01	2.16E-02	1.31E-02
	Eutrophication	kg PO <sub>4</sub> <sup>3-</sup>	7.85E-02	6.90E-02	5.23E-03	4.25E-03
	Photochemical oxidant formation	kg NMVOC eq	1.63E-01	1.32E-01	1.55E-02	1.50E-02
	Abiotic depletion	kg Sb eq	6.06E-04	5.68E-04	2.97E-05	8.34E-06
	Abiotic depletion (fossil fuels)	MJ	6.04E+02	4.58E+02	1.06E+02	4.00E+01
	Water use	m <sup>3</sup> eq	1.44E+01	1.19E+01	2.39E+00	1.11E-01
Resource consumption	Energy resources, renewable	MJ	4.98E+01	3.80E+01	1.12E+01	5.52E-01
	Raw materials resources, renewable	MJ	4.31E+01	4.31E+01	0.00E+00	0.00E+00
	Total resources, renewable	MJ	9.29E+01	8.11E+01	1.12E+01	5.52E-01
	Energy resources, non renewable	MJ	5.21E+02	3.52E+02	1.25E+02	4.36E+01
	Raw materials resources, non renewable	MJ	1.90E+02	1.90E+02	0.00E+00	0.00E+00
	Total resources, non renewable	MJ	7.11E+02	5.42E+02	1.25E+02	4.36E+01
	Total amount of water	m <sup>3</sup>	4.97E-01	4.28E-01	6.10E-02	7.37E-03
Waste	Hazardous waste	kg	5.51E-01	5.16E-01	1.08E-02	2.43E-02
	Non-Hazardous waste	kg	1.16E+01	8.97E+00	3.79E-01	2.26E+00
	Radioactive waste	kg	1.79E-03	1.35E-03	2.00E-04	2.34E-04
Additional environmental indicators	Human toxicity, cancer	cases	8.36E-06	7.96E-06	2.43E-07	1.53E-07
	Human toxicity, non-cancer	cases	1.31E-05	1.19E-05	6.41E-07	5.30E-07
	Freshwater ecotoxicity	PAF.m3.day	2.35E+06	1.78E+06	3.79E+04	5.34E+05
	Land use	species.yr	2.37E-08	2.22E-08	6.49E-10	8.37E-10

Characterization results for Elephantino with swivel trestle.

	Gross weights (kg)	LHV (MJ/kg)	Total (MJ)	Upstream (MJ)	Core (MJ)	Downstream (MJ)	
Use of resources	Non-renewable resources, materials	4,25	190,40	190,40	-	-	
	PP	4,25	44,80	190,40	190,40	-	-
	Renewable resources, materials	2,51		43,07	43,07	-	-
	Paper	0,005	14,9	0,07	0,07	-	-
	Cardboard	2,5	17,2	43,00	43,00	-	-

Material resource inventory for Elephantino with swivel trestle.



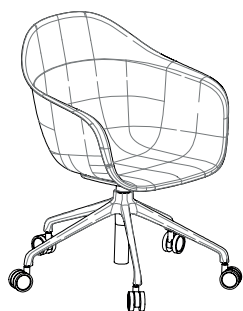
## Elephantino trestle with wheels

	Impact category	Unit	Total	Upstream	Core	Downstream
Environmental impact categories	Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	5.89E+01	4.33E+01	9.46E+00	6.11E+00
	Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	5.75E+01	4.29E+01	9.28E+00	5.29E+00
	Global warming (GWP100a)_biogenic	kg CO <sub>2</sub> eq	1.31E+00	3.05E-01	1.87E-01	8.19E-01
	Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	9.99E-02	9.74E-02	1.54E-03	1.00E-03
	Acidification (fate not incl.)	kg SO <sub>2</sub> eq	2.67E-01	2.30E-01	2.38E-02	1.36E-02
	Eutrophication	kg PO <sub>4</sub> <sup>3-</sup>	8.11E-02	7.09E-02	5.76E-03	4.43E-03
	Photochemical oxidant formation	kg NMVOC eq	1.70E-01	1.37E-01	1.71E-02	1.55E-02
	Abiotic depletion	kg Sb eq	6.04E-04	5.63E-04	3.26E-05	8.61E-06
	Abiotic depletion (fossil fuels)	MJ	6.47E+02	4.90E+02	1.16E+02	4.10E+01
	Water use	m <sup>3</sup> eq	1.68E+01	1.41E+01	2.62E+00	1.16E-01
Resource consumption	Energy resources, renewable	MJ	5.31E+01	4.02E+01	1.23E+01	5.69E-01
	Raw materials resources, renewable	MJ	4.31E+01	4.31E+01	0.00E+00	0.00E+00
	Total resources, renewable	MJ	9.62E+01	8.33E+01	1.23E+01	5.69E-01
	Energy resources, non renewable	MJ	5.63E+02	3.81E+02	1.38E+02	4.48E+01
	Raw materials resources, non renewable	MJ	2.02E+02	2.02E+02	0.00E+00	0.00E+00
	Total resources, non renewable	MJ	7.65E+02	5.83E+02	1.38E+02	4.48E+01
	Total amount of water	m <sup>3</sup>	5.42E-01	4.67E-01	6.71E-02	7.63E-03
Waste	Hazardous waste	kg	5.37E-01	5.00E-01	1.18E-02	2.53E-02
	Non-Hazardous waste	kg	1.17E+01	9.00E+00	4.22E-01	2.33E+00
	Radioactive waste	kg	1.87E-03	1.41E-03	2.20E-04	2.41E-04
Additional environmental indicators	Human toxicity, cancer	cases	9.08E-06	8.65E-06	2.68E-07	1.61E-07
	Human toxicity, non-cancer	cases	1.30E-05	1.18E-05	7.06E-07	5.56E-07
	Freshwater ecotoxicity	PAF.m3.day	2.26E+06	1.71E+06	4.17E+04	5.07E+05
	Land use	species.yr	2.45E-08	2.30E-08	7.16E-10	8.63E-10

Characterization results for Elephantino with trestle with wheels.

	Gross weights (kg)	LHV (MJ/kg)	Total (MJ)	Upstream (MJ)	Core (MJ)	Downstream (MJ)
Use of resources	Non-renewable resources, materials	4,49	201,88	201,88	-	-
	PP	4,24	44,80	189,95	189,95	-
	PA 6	0,25	30,50	7,63	7,63	-
	Rubber	0,1	43	4,30	4,30	-
	Renewable resources, materials	2,51		43,07	43,07	-
	Paper	0,005	14,9	0,07	0,07	-
	Cardboard	2,5	17,2	43,00	43,00	-

Material resource inventory for Elephantino with trestle with wheels.



## Elephantino 5-spokes base

	Impact category	Unit	Total	Upstream	Core	Downstream
Environmental impact categories	Global warming (GWP100a)_total	kg CO <sub>2</sub> eq	6.16E+01	4.56E+01	9.59E+00	6.40E+00
	Global warming (GWP100a)_fossil	kg CO <sub>2</sub> eq	6.02E+01	4.52E+01	9.40E+00	5.58E+00
	Global warming (GWP100a)_biogenic	kg CO <sub>2</sub> eq	1.32E+00	3.07E-01	1.89E-01	8.20E-01
	Global warming (GWP100a)_land use	kg CO <sub>2</sub> eq	1.10E-01	1.07E-01	1.58E-03	1.11E-03
	Acidification (fate not incl.)	kg SO <sub>2</sub> eq	2.76E-01	2.37E-01	2.42E-02	1.50E-02
	Eutrophication	kg PO <sub>4</sub> <sup>3-</sup>	8.62E-02	7.56E-02	5.85E-03	4.71E-03
	Photochemical oxidant formation	kg NMVOC eq	1.82E-01	1.47E-01	1.75E-02	1.71E-02
	Abiotic depletion	kg Sb eq	6.27E-04	5.85E-04	3.30E-05	9.50E-06
	Abiotic depletion (fossil fuels)	MJ	6.79E+02	5.16E+02	1.18E+02	4.49E+01
	Water use	m <sup>3</sup> eq	1.86E+01	1.58E+01	2.64E+00	1.28E-01
Resource consumption	Energy resources, renewable	MJ	5.43E+01	4.12E+01	1.24E+01	6.24E-01
	Raw materials resources, renewable	MJ	4.31E+01	4.31E+01	0.00E+00	0.00E+00
	Total resources, renewable	MJ	9.74E+01	8.43E+01	1.24E+01	6.24E-01
	Energy resources, non renewable	MJ	5.99E+02	4.11E+02	1.40E+02	4.89E+01
	Raw materials resources, non renewable	MJ	2.03E+02	2.03E+02	0.00E+00	0.00E+00
	Total resources, non renewable	MJ	8.02E+02	6.14E+02	1.40E+02	4.89E+01
	Total amount of water	m <sup>3</sup>	5.76E-01	5.00E-01	6.77E-02	8.30E-03
Waste	Hazardous waste	kg	5.29E-01	4.91E-01	1.20E-02	2.56E-02
	Non-Hazardous waste	kg	1.31E+01	1.01E+01	4.71E-01	2.56E+00
	Radioactive waste	kg	1.97E-03	1.47E-03	2.28E-04	2.68E-04
Additional environmental indicators	Human toxicity, cancer	cases	1.45E-05	1.41E-05	2.73E-07	1.76E-07
	Human toxicity, non-cancer	cases	1.37E-05	1.24E-05	7.18E-07	5.93E-07
	Freshwater ecotoxicity	PAF.m3.day	2.19E+06	1.67E+06	4.22E+04	4.81E+05
	Land use	species.yr	2.48E-08	2.31E-08	7.43E-10	9.57E-10

Characterization results for Elephantino with 5-spoke base.

	Gross weights (kg)	LHV (MJ/kg)	Total (MJ)	Upstream (MJ)	Core (MJ)	Downstream (MJ)
Use of resources	Non-renewable resources, materials	4,68	204,78	204,78	-	-
	PP	4,24	44,80	189,95	189,95	-
	PE	0,31	30,50	9,46	9,46	-
	Rubber	0,125	43	5,38	5,38	-
	Renewable resources, materials	2,51		43,07	43,07	-
	Paper	0,005	14,9	0,07	0,07	-
	Cardboard	2,5	17,2	43,00	43,00	-

Material resource inventory for Elephantino with 5-spoke base.

# Company and certification information

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The LCA study has been carried out by Kristalia in collaboration with 2B srl ([www.to-be.it](http://www.to-be.it)).

## CERTIFICATION AND CERTIFICATION BODY

Registration number: S-P-09106
Publication date: 2023-04-06
Validity date: 2028-04-06
Reference year: 2022
Geographical scope: Global
PCR 2009:02, version 3.0 (UN CPC 3811, Seats) valid until: 2024-04-17
PCR reviewed by Leo Breedveld
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: Guido Croce (individual verifier) Approved by: The International EPD® System
The follow-up procedure for data during EPD validity involves a third-party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

## ADDITIONAL INFORMATION

This EPD is developed within International EPD® System.  
This document is available on Swedish Environmental Management Council's website ([www.environdec.com](http://www.environdec.com)).  
EPDs belonging to the same product category are not necessarily comparable; if comparisons are carried out it is important to consider the different system boundaries and data sources.

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**Please  
do not  
feed the  
Elephant.**