

# EPD Environmental Product Declaration



## Chair STAY

Ref. 9002M14

Report Data 27.05.2021

### Certificates

ISO 9001:2008

ISO 14001:2004

ISO 14006. Ecodiseño

PEFC. Cadena Custodia Productos Madera

FSC. Forest Stewardship Council

GBCe. Green Building Council España



### 1. Details of the system

Type	New Product	<input checked="" type="checkbox"/>	Redesign	<input type="checkbox"/>	Studied Year 2021
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Declaration Scope: From extraction of raw materials to complete desk solution, including end of life. The detail of each of the phases considered and its scope is included below

Materials	Production	Transport	Use	End of life
Including the extraction and processing of raw materials and component sourcing to its delivery at the Actiu Technological Park.	Consider the production and assembly processes used in Actiu.	Includes from the Actiu Technological Park to our customers facilities. Transport is provided through light commercial transport.	This stage has not environmentally relevance for life cycle analysis.	Any product can be disposed of in different ways, or become a resource. Drawing on national average dates, it is supposed that aluminium, wood and cardboard packaging is recycled, while the rest is treated as urban waste.

### 2. RAW MATERIALS USED FOR THE PRODUCT. Product specifications, including packaging

	KG of product solution	Percentage %	Quality of finishes	
			Production of raw materials	Processed
<b>Plastic</b>	4,950	30,08%	Bibliographic data	Bibliographic data
<b>Aluminium</b>	6,372	38,71%	Bibliographic data	Bibliographic data
<b>Carton</b>	1,825	11,09%	Bibliographic data	Bibliographic data
<b>Steel</b>	2,602	15,81%	Bibliographic data	Bibliographic data
<b>Others</b>	0,710	4,31%	Bibliographic data	Bibliographic data
<b>TOTAL</b>	<b>16,459</b>	<b>100,00%</b>		
<b>% recycled materials</b>		<b>49,80%</b>		
<b>% recyclable materials</b>		<b>65,61%</b>		

ACTIU product design is made to facilitate the separation of its components and recycling.

The product is designed to help companies LEED® certification. You can obtain LEED® credits with our product. On the one hand, contains a high percentage of recycled materials and is manufactured with low emissions to the atmosphere. On the other hand, has been designed with ergonomic standards. Finally, it can be easily recycled because it is designed for disassembly and identification of very simple components. This will help you achieve LEED® credits for employee health and innovation

The verification process life cycle analysis is performed by independent experts in Ecodesign (Consultant Business Area) and using the criteria of the standard UNE ISO 14006 "Ecodesign".

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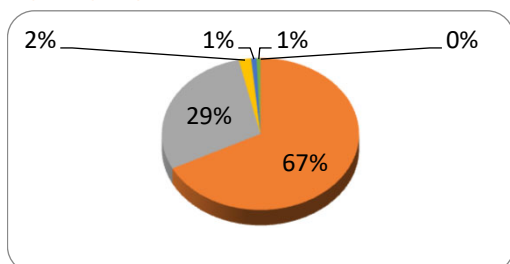
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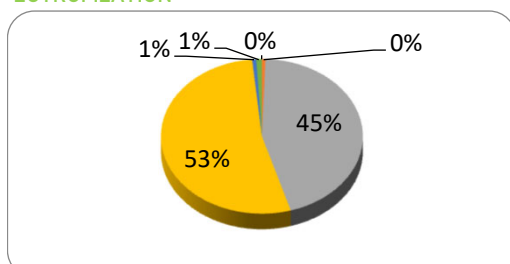
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### 3. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

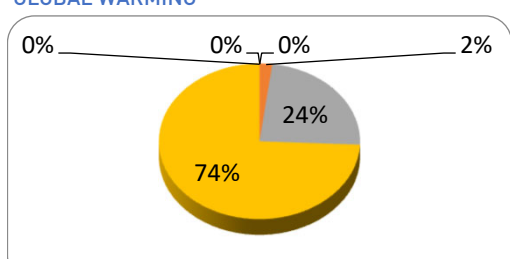
Impact category	Substance	Unit	Total
<b>ACIDIFICATION</b>	Remaining substances	kg SO2 eq	0
	Animal matter	kg SO2 eq	0,023683701
	Aluminium, in ground	kg SO2 eq	0,010153103
	Aluminium, 24% in bauxite, 11% in	kg SO2 eq	0,000714366
	Acetaldehyde	kg SO2 eq	0,000305408
	Acenaphthene	kg SO2 eq	0,000225927
<b>TOTAL</b>		<b>kg SO2 eq</b>	<b>0,057057</b>



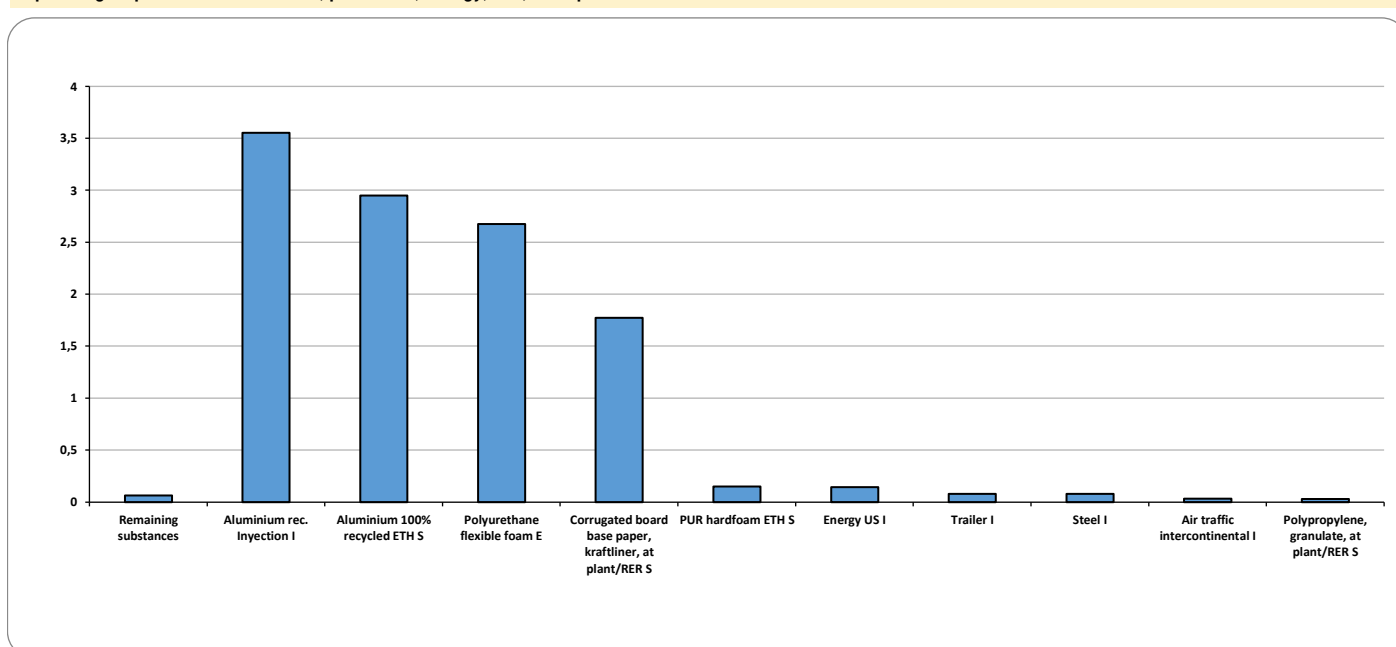
Impact category	Substance	Unit	Total
<b>EUTROFIZATION</b>	Remaining substances	kg PO4--- eq	0
	Ammonia	kg PO4--- eq	4,40E-05
	Dinitrogen monoxide	kg PO4--- eq	0,003361882
	Nitrogen oxides	kg PO4--- eq	0,003981326
	Nitrogen, total	kg PO4--- eq	4,94E-05
	Phosphorus	kg PO4--- eq	6,68E-05
<b>TOTAL</b>		<b>kg SO2 eq</b>	<b>0,00056784</b>



Impact category	Substance	Unit	Total
<b>GLOBAL WARMING</b>	Remaining substances	kg CO2 eq	0
	Carbon dioxide	kg CO2 eq	0,165397056
	Carbon dioxide, fossil	kg CO2 eq	1,902312141
	Dinitrogen monoxide	kg CO2 eq	5,978740693
	Ethane, 1,1,1,2-tetrafluoro-, HFC-	kg CO2 eq	4,69E-262
		0	0
<b>TOTAL</b>		<b>kg SO2 eq</b>	<b>3,55371471</b>



### Impact of group elements (materials, processes, energy, use, transport and waste)



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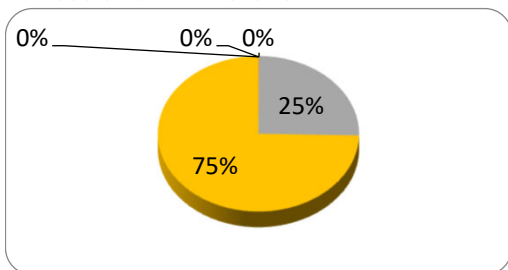
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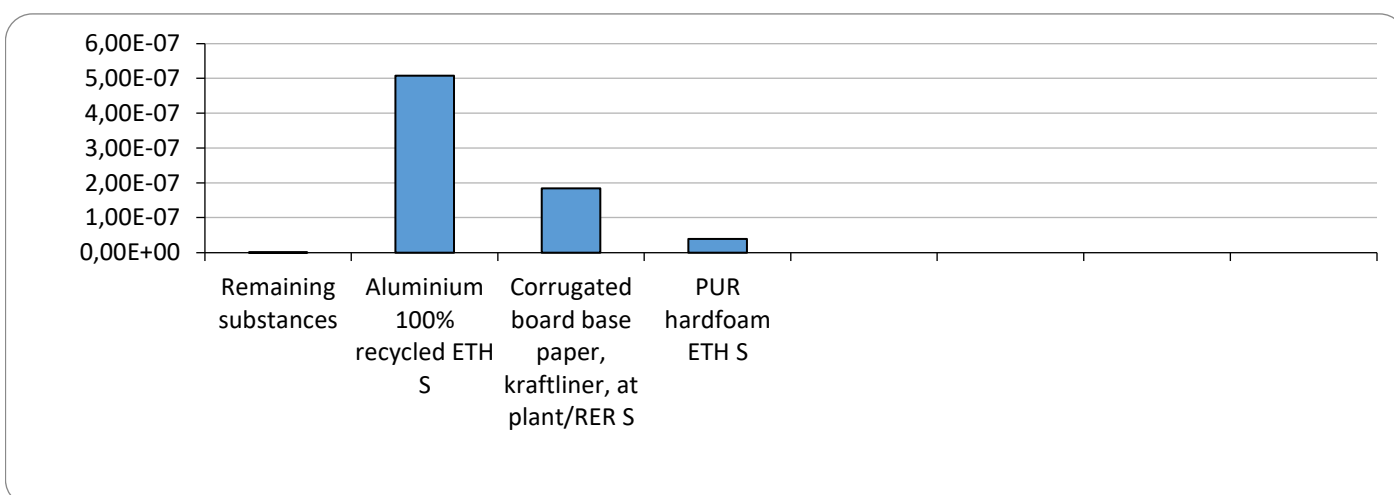
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### 4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

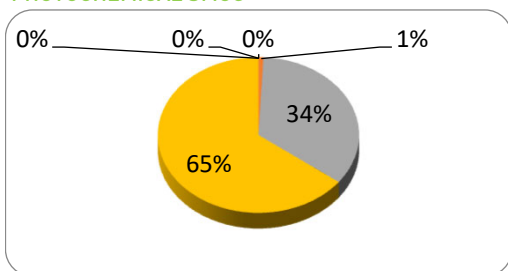
Impact category	Substance	Unit	Total	
<b>REDUCCIÓN CAPA DE OZONO</b>	Remaining substances	kg CFC-11 eq	0	
	Methane, bromochlorodifluoro-	kg CFC-11 eq	5,42E-10	
	Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	1,85E-07	
	Methane, tetrachloro-, CFC-10	kg CFC-11 eq	5,47E-07	
	Methane, trichloro- and CFC-11	kg CFC-11 eq	4,69E-262	
		0	0	0
	<b>TOTAL</b>		<b>kg SO2 eq</b>	<b>0</b>



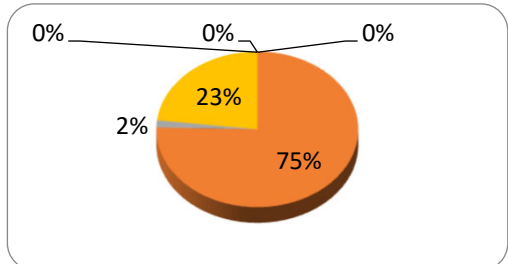
### Impact of group elements (materials, processes, energy, use, transport and waste)



Impact category	Substance	Unit	Total
<b>PHOTOCHEMICAL SMOG</b>	Remaining substances	kg C2H4 eq	0
	Butane	kg C2H4 eq	4,39E-05
	Carbon monoxide	kg C2H4 eq	0,001881182
	Ethane	kg C2H4 eq	0,003524905
	Ethene	kg C2H4 eq	4,69E-262
	Toluene	kg C2H4 eq	6,23E-09
	<b>TOTAL</b>		<b>kg SO2 eq</b>



Impact category	Substance	Unit	Total
<b>NON-RENEWABLE RESOURCES</b>	Remaining substances	MJ eq	0
	Coal, brown, in ground	MJ eq	109,0772947
	Coal, 18 MJ per kg, in ground	MJ eq	2,135123605
	Coal, 29,3 MJ per kg, in ground	MJ eq	33,48168564
	Coal, hard, unspecified, in ground	MJ eq	4,69E-262
	Gas, natural, 35 MJ per m3, in ground	MJ eq	4,69E-262
	<b>TOTAL</b>		<b>kg SO2 eq</b>



WASTE	Total NO HAZARDOUS	KG	3,91
	Total HAZARDOUS	KG	0,0502

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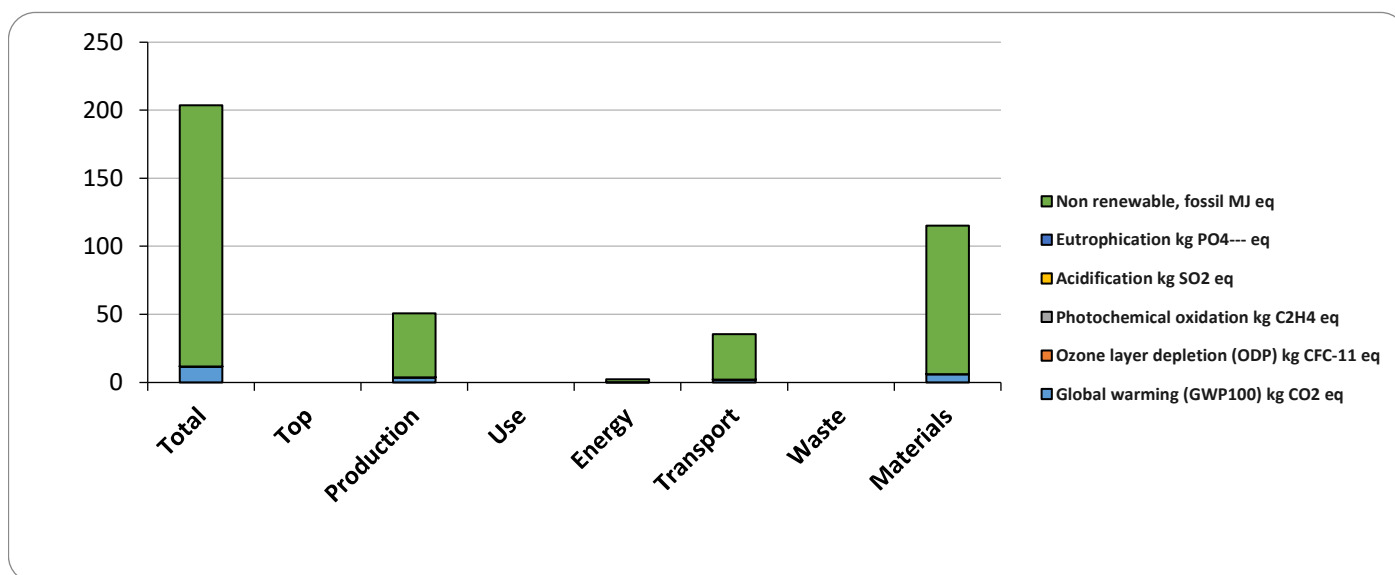
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### 5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Category	Uts.	Total	Top	Production	Use	Energy	Trsp.	Waste	Mat.
Global warming (GWP100)	kg CO2 eq	11,6001646	0	3,55371471	0	0,165397056	1,902	0	5,979
Ozone layer depletion (ODP)	kg CFC-11 eq	7,33E-07	0	0	0	5,42E-10	###	0	###
Photochemical oxidation	kg C2H4 eq	0,012059296	0	0,00660933	0	4,39E-05	0,002	0	0,004
Acidification	kg SO2 eq	0,09160817	0	0,057057	0	0,000714366	0,01	0	0,024
Eutrophication	kg PO4--- eq	0,007955057	0	0,00056784	0	4,40E-05	0,003	0	0,004
Non renewable, fossil	MJ eq	191,8316489	0	47,137545	0	2,135123605	33,48	0	109,1



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### 6. Ecodesign improvements considered.

ACTIU products are designed considering different environmental strategies. According to their level of complexity, the strategies used are classified into one of the following. Here are some of the choices for ecodesign significant product.

PRODUCT STRATEGY ECODESIGN	OPTIONS CHOSEN WITH THE PRODUCT
Low impact materials selection	<p>Designed to be manufactured with 65% recycled materials</p> <p>100% recycled aluminium</p> <p>Powder paint with no VOC emissions</p> <p>Limitation on use of hazardous substances. Without chromium, mercury, cadmium</p> <p>Embalajes realizados en cartón reciclado.</p>
Optimization of product techniques	<p>Optimizing energy use throughout the production process</p> <p>Low manufacturing energy consumption. Minimum environmental impact.</p> <p>Painting processes of high technology systems.</p> <p>Recovery unused paint in the process. Zero emissions of VOCs.</p> <p>Closed water circuits. Heat recovery.</p> <p>Optimization of energy use in the manufacturing process: Heat recovery in the painting process, automated manufacturing systems to save energy.</p>
Optimization of distribution system	<p>Reducing energy. Removable systems. Low volume packaging. Spaces optimization.</p> <p>Saving energy and Flexibility. Modular system adaptable between different models.</p>
Optimization of product life	<p>15 years minimum product life</p> <p>Easy maintenance and cleaning of the product. It is easily cleaned with a damp cloth with water.</p> <p>The product is part of a modular program. Easy to modify, expand and repair to optimize its useful life.</p>
Optimization of the end of system life	<p>Easy separation of product components</p> <p>High degree of recyclability of the product: 70%</p> <p>Packaging reuse system between ACTIU and its supplier park to avoid the generation of waste</p>

### Bibliografía y referencias

ISO 14025 Etiquetas ecológicas y declaraciones – Tipo III

ISO 14044:2006 "Gestión ambiental. Análisis ciclo de vida. Requisitos y directrices"

UNE - EN ISO 14006:2011 "Sistemas de gestión ambiental. Directrices para la incorporación del ecodiseño"

Métodos para el cálculo de impactos ambientales

Base datos: ETH-ESU System processes, Ecoinvent system processes, IDEMAT, EDIP, IPCC, Ecological Scarcity 2006.