

EPD Environmental Product Declaration



Chair STAY

Ref. 910112ZM12

Report Data 27.05.2021

Certificates

ISO 9001:2008

ISO 14001:2004

ISO 14006. Ecodesign

PEFC. Programme for the Endorsement of Forest Certification

FSC. Forest Stewardship Council

GBCe. Green Building Council España



1. Details of the system

Type New Product Redesign Studied Year 2021

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
Plastic	4,630	27,79%	Bibliographic data	Bibliographic data
Aluminium	6,962	41,79%	Bibliographic data	Bibliographic data
Carton	1,825	10,96%	Bibliographic data	Bibliographic data
Steel	2,327	13,97%	Bibliographic data	Bibliographic data
Others	0,915	5,49%	Bibliographic data	Bibliographic data
TOTAL	16,659	100,00%		
% recycled materials		52,75%		
% recyclable materials		66,71%		

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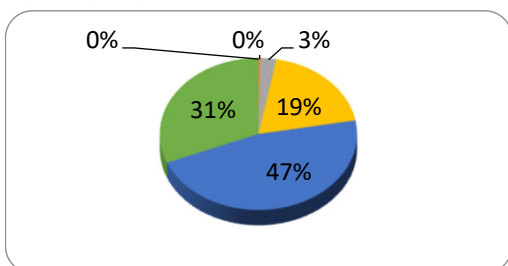
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3. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

Impact category

ACIDIFICATION

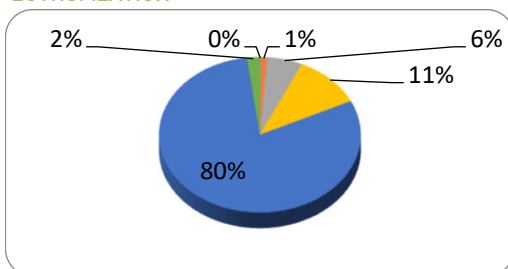


Substance	Unit	Total
Remanent substances	kg SO2 eq	0
Ammonia	kg SO2 eq	0,001622994
Nitrogen dioxide	kg SO2 eq	0,015177533
Nitrogen oxides	kg SO2 eq	0,110125116
Sulfur dioxide	kg SO2 eq	0,267899708
Sulfur oxides	kg SO2 eq	0,178840761

TOTAL **kg SO2 eq** **0,473666112**

Impact category

EUTROFIZATION

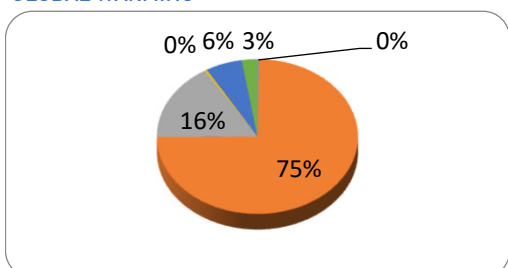


Substance	Unit	Total
Remanent substances	kg P04--- eq	4,90277E-05
Ammonia	kg P04--- eq	0,00035503
Dinitrogen monoxide	kg P04--- eq	0,002032587
Nitrogen dioxide	kg P04--- eq	0,003946159
Nitrogen oxides	kg P04--- eq	0,02863253
Ammonium, ion	kg P04--- eq	0,000739632

TOTAL **kg SO2 eq** **0,042795193**

Impact category

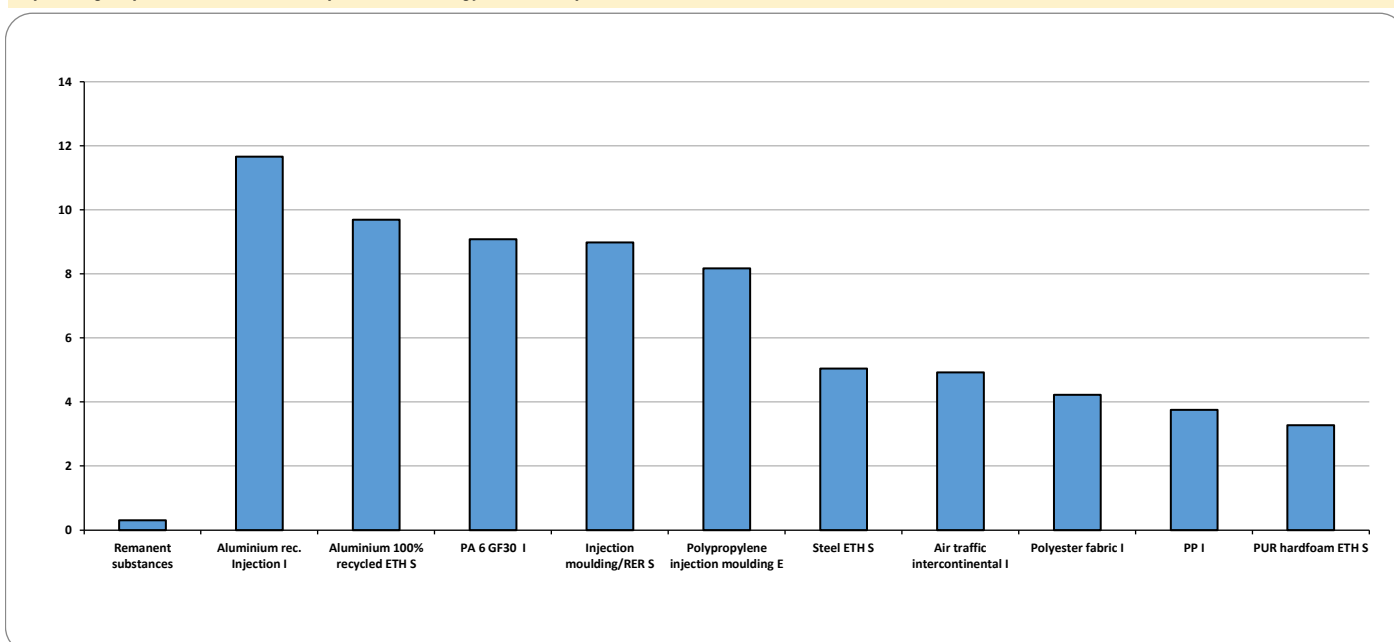
GLOBAL WARMING



Substance	Unit	Total
Remanent substances	kg CO2 eq	0,16903743
Carbon dioxide	kg CO2 eq	58,53927794
Carbon dioxide, fossil	kg CO2 eq	12,82474961
Carbon monoxide	kg CO2 eq	0,253320437
Dinitrogen monoxide	kg CO2 eq	4,628043254
Ethane, 1,1,1,2-tetrafluoro-, HFC-	kg CO2 eq	1,980166265

TOTAL **kg SO2 eq** **81,79881909**

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



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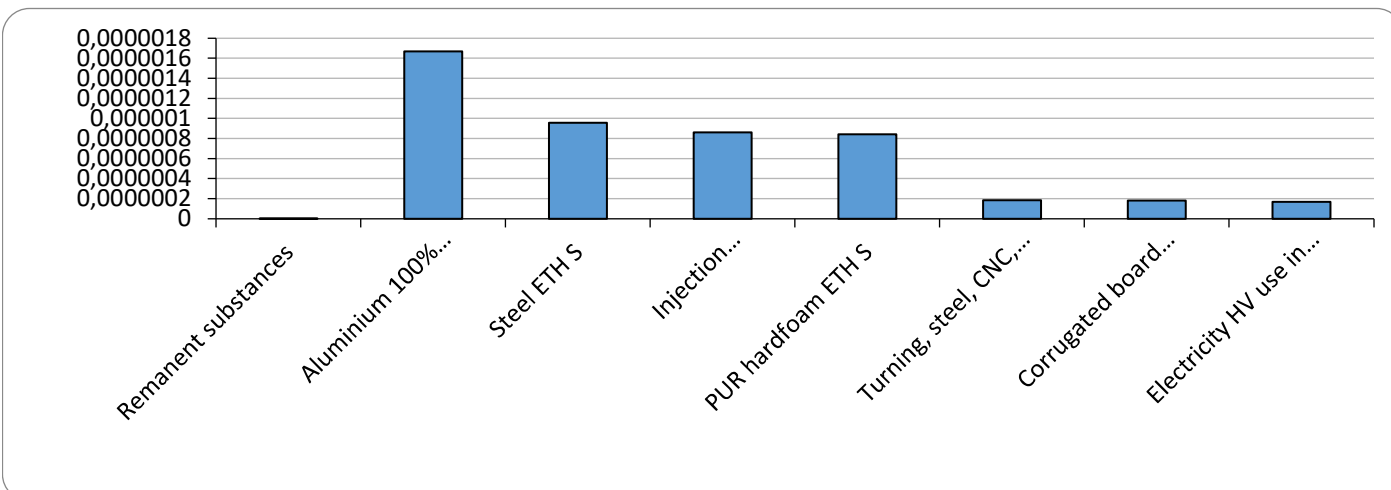
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4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

Impact category	Substance	Unit	Total
REDUCING OZONE	Remanent substances	kg CFC-11 eq	3,40261E-11
	Methane, bromochlorodifluoro-	kg CFC-11 eq	9,03575E-07
	Methane, bromotrifluoro-	kg CFC-11 eq	4,01158E-06
	Halon 1301	kg CFC-11 eq	5,69542E-08
	Methane, chlorodifluoro-	kg CFC-11 eq	1,13848E-07
	HFC-22	kg CFC-11 eq	1,13848E-07
	Methane, tetrachloro-	kg CFC-11 eq	1,13848E-07
	CFC-10	kg CFC-11 eq	3,42144E-08
	Methane, trichlorofluoro-	kg CFC-11 eq	3,42144E-08
	CFC-11	kg CFC-11 eq	3,42144E-08
	TOTAL	kg SO2 eq	5,12021E-06

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



Impact category	Substance	Unit	Total
PHOTOCHEMICAL SMOG	Remanent substances	kg C2H4 eq	0,00045747
	Butane	kg C2H4 eq	9,77379E-05
	Carbon monoxide	kg C2H4 eq	0,004356466
	Carbon monoxide, fossil	kg C2H4 eq	0,000662447
	Ethane	kg C2H4 eq	0,000117643
	Ethene	kg C2H4 eq	0,000133732
	TOTAL	kg SO2 eq	0,093671942

Impact category	Substance	Unit	Total
NON-RENEWABLE RESOURCES	Remanent substances	MJ eq	2,811619956
	Coal, 18 MJ per kg, in ground	MJ eq	85,86872477
	Coal, 29.3 MJ per kg, in ground	MJ eq	67,72927746
	Coal, brown, 10 MJ per kg, in grou	MJ eq	2,247552
	Coal, brown, 8 MJ per kg, in groun	MJ eq	12,72588697
	Coal, brown, in ground	MJ eq	25,83560348
	TOTAL	kg SO2 eq	1438,46298

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

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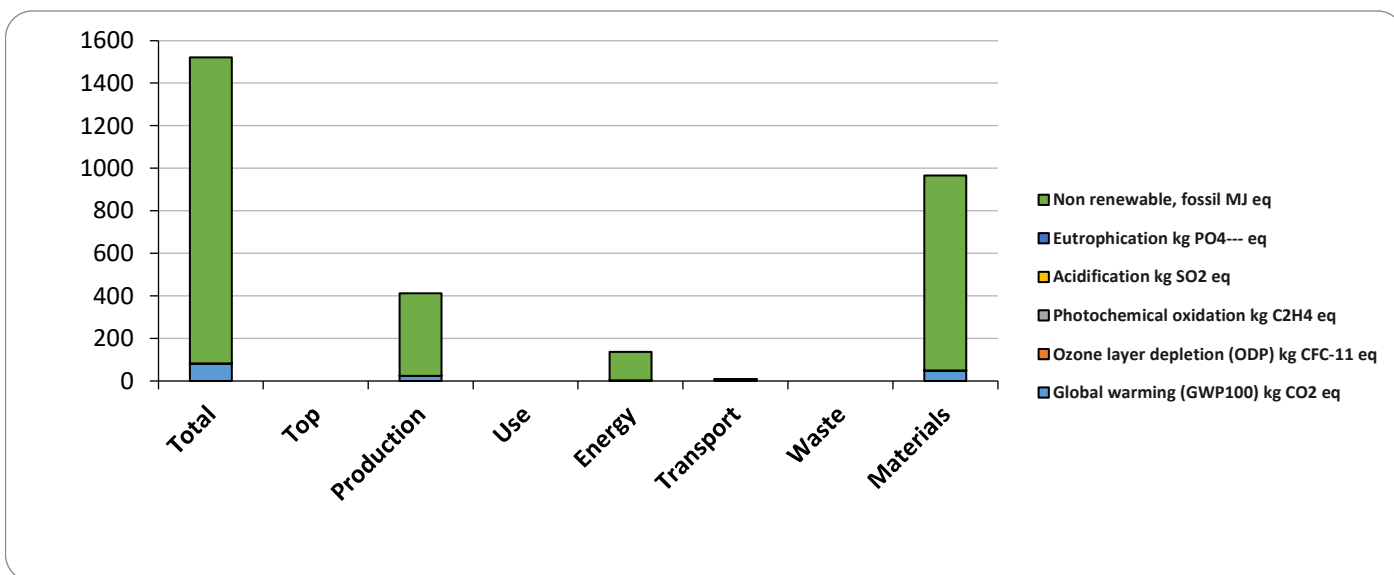
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5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Category	Uts.	Total	Top	Production	Use	Energy	Trsp.	Waste	Mat.
Global warming (GWP100)	kg CO2 eq	81,79881909	0	23,42415677	0	2,543331121	6,917	1,64626E-08	48,91
Ozone layer depletion (ODP)	kg CFC-11 eq	5,12021E-06	0	1,04676E-06	0	2,25416E-07	6E-10	0	4E-06
Photochemical oxidation	kg C2H4 eq	0,093671942	0	0,028237427	0	0,003116265	0,005	1,34516E-11	0,057
Acidification	kg SO2 eq	0,573666112	0	0,226539486	0	0,015433805	0,05	2,07003E-10	0,282
Eutrophication	kg PO4-- eq	0,042795193	0	0,006725231	0	0,00134172	0,007	4,24901E-11	0,028
Non renewable, fossil	MJ eq	1438,46298	0	388,7044873	0	132,9768669	0,01	0	916,8



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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.

ESTRATEGIA DE ECODISEÑO DE PRODUCTO	OPTIONS CHOSEN WITH THE PRODUCT
Low impact materials selection	Designed to be manufactured with 40% recycled materials
	100% recycled aluminium
	Powder paint with no VOC emissions
	Limitation on use of hazardous substances. Without chromium, mercury, cadmium
Optimization of product techniques	Recycled cardboard packaging
	Optimizing energy use throughout the production process
	Low manufacturing energy consumption. Minimum environmental impact.
	Painting processes of high technology systems.
	Recovery unused paint in the process. Zero emissions of VOCs.
Optimization of distribution system	Closed water circuits. Heat recovery.
	Optimization of energy use in the manufacturing process: Heat recovery in the painting process, automated manufacturing systems to save energy.
	Reducing energy. Removable systems. Low volume packaging. Spaces optimization.
Optimization of product life	Saving energy and Flexibility. Modular system adaptable between different models.
	15 years minimum product life
Optimization of the end of system life	Easy maintenance and cleaning of the product. It is easily cleaned with a damp cloth with water.
	Easy separation of product components
	High degree of recyclability of the product: 70%
	Packaging reuse system between ACTIU and its providers to avoid waste generation

Bibliography and references

ISO 14025 Environmental labels and declarations – Type III

UNE-EN-ISO 14006 "Ecodesign".

ISO 14006 "Ecodesign"

UNE ISO 14006 "Ecodesign"

Environmental impacts methods

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