

EPD Environmental Product Declaration

PRISMA Table

Ref. PM141111

Report Data 17,04,2014

Certificates

ISO 9001:2008

ISO 14001:2004

ISO 14006. Ecodiseño

PEFC. Programme for the Endorsement of Forest Certification

FSC. Forest Stewardship Council

GBCe. Green Building Council Spain



1. Details of the system

Type New Product ☒ Redesign ☐ Studied Year 2014

Declaration From extraction of raw materials to complete desk solution, including end of life.
Scope: 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
Wood	18,01	41,36%	Bibliographic data	Bibliographic data
Steel	17,95	41,22%	Bibliographic data	Bibliographic data
Carton	3,484	8,00%	Bibliographic data	Bibliographic data
Other	0,028	0,06%	Bibliographic data	Bibliographic data
Aluminium	2,924	6,71%	Bibliographic data	Bibliographic data
Plastic	1,1487	2,64%	Bibliographic data	Bibliographic data
TOTAL	43,5447	100,00%		
% recycled materials		47,80%		
% recyclable materials		97,30%		

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 ISO 14006 "Ecodesign".

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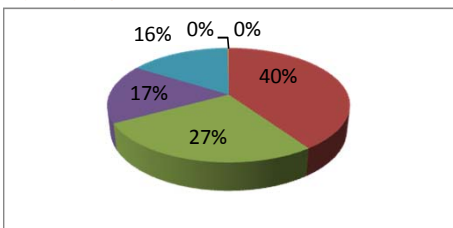
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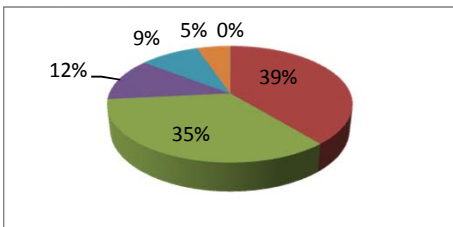
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3. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

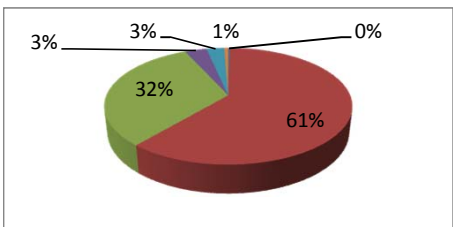
Impact category	Substance	Unit	Total
ACIDIFICATION	Substancias remanentes	kg SO2 eq	2,22045E-16
	Sulfur oxides	kg SO2 eq	0,493526029
	Sulfur dioxide	kg SO2 eq	0,325776501
	Ammonia	kg SO2 eq	0,205174703
	Nitrogen oxides	kg SO2 eq	0,194548063
	Nitrogen dioxide	kg SO2 eq	0,002363696
	TOTAL	kg SO2 eq	1,221388992



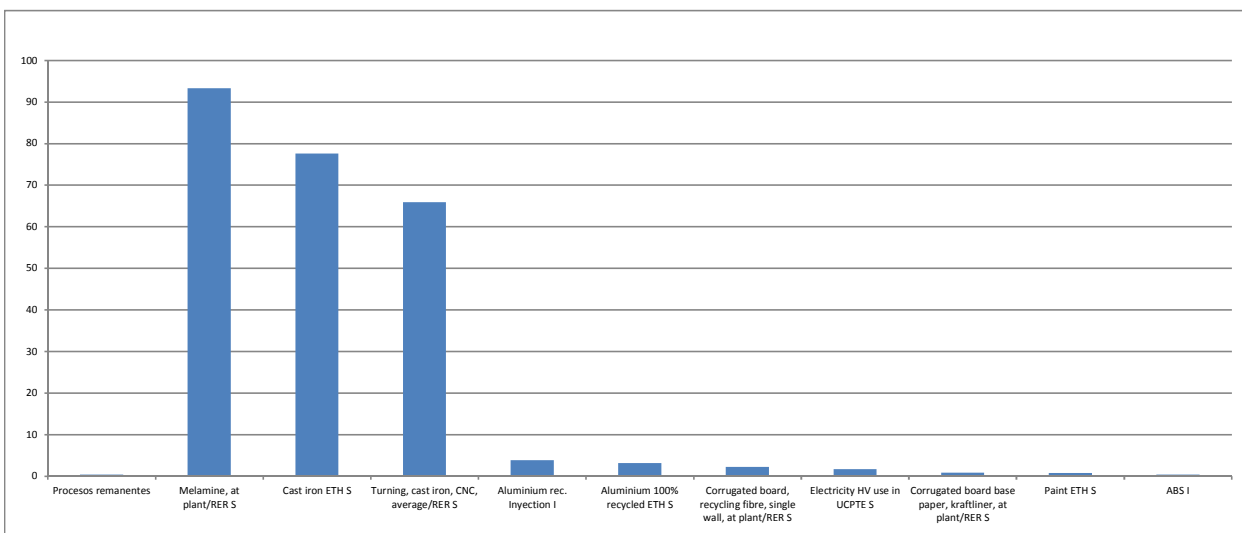
Impact category	Substance	Unit	Total
EUTROFIZATION	Substancias remanentes	kg P04--- eq	0,000145899
	Nitrogen oxides	kg P04--- eq	0,050582496
	Ammonia	kg P04--- eq	0,044881966
	Phosphate	kg P04--- eq	0,015620825
	COD, Chemical Oxygen Demand	kg P04--- eq	0,012107519
	Ammonium, ion	kg P04--- eq	0,006875594
	TOTAL	kg SO2 eq	0,13997848



Impact category	Substance	Unit	Total
GLOBAL WARMING	Substancias remanentes	kg CO2 eq	0,602713096
	Carbon dioxide, fossil	kg CO2 eq	151,7294697
	Carbon dioxide	kg CO2 eq	79,53358539
	Methane, fossil	kg CO2 eq	8,475496406
	Methane	kg CO2 eq	6,926619946
	Dinitrogen monoxide	kg CO2 eq	1,516125333
	TOTAL	kg SO2 eq	250,4879866



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



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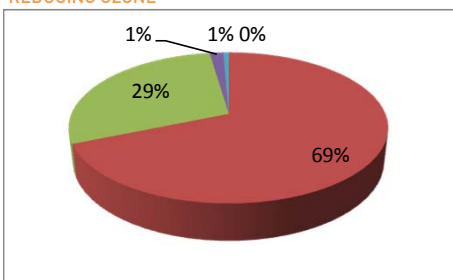
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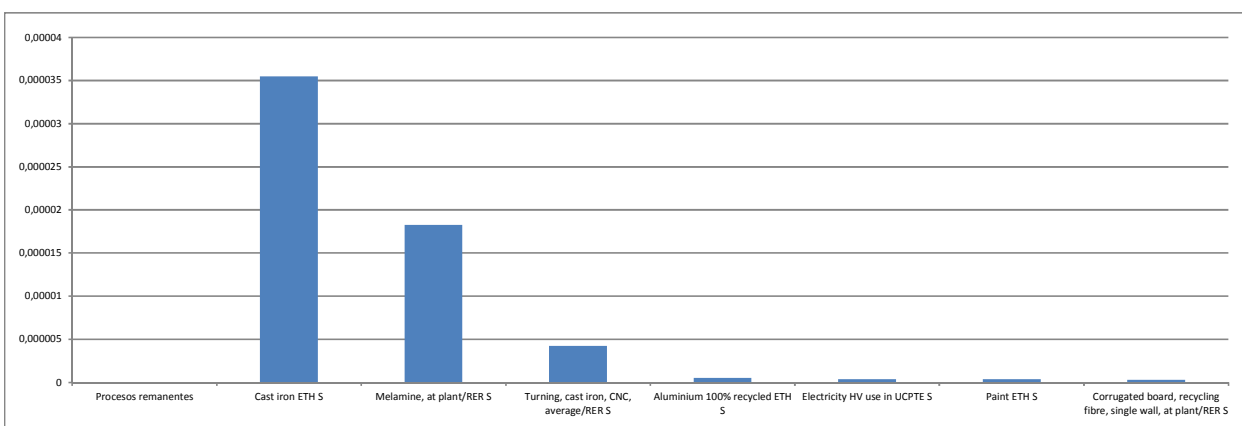
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4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

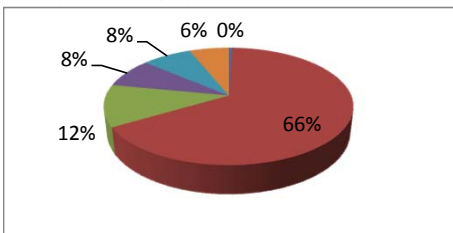
Impact category	Substance	Unit	Total
REDUCING OZONE	Substancias remanentes	kg CFC-11 eq	1,83709E-09
	Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	4,10096E-05
	Methane, bromochlorodifluoro-, Halon 1211	kg CFC-11 eq	1,72671E-05
	Methane, chlorodifluoro-, HCFC-22	kg CFC-11 eq	9,84185E-07
	Methane, tetrachloro-, CFC-10	kg CFC-11 eq	4,00822E-07
	Methane, trichlorofluoro-, CFC-11	kg CFC-11 eq	6,84732E-08
	TOTAL	kg SO2 eq	5,97319E-05



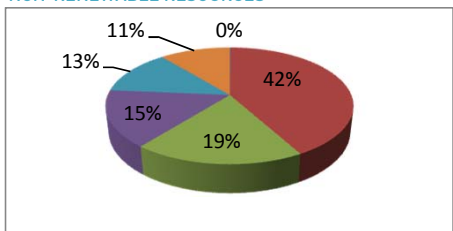
Impact of group elements (materials, processes, energy, use, transport and waste)



Impact category	Substance	Unit	Total
PHOTOCHEMICAL SMOG	Substancias remanentes	kg C2H4 eq	0,000908436
	NMVOG, non-methane volatile orga	kg C2H4 eq	0,135227773
	Sulfur oxides	kg C2H4 eq	0,023689249
	Carbon monoxide, fossil	kg C2H4 eq	0,016797127
	Sulfur dioxide	kg C2H4 eq	0,015637272
	Carbon monoxide	kg C2H4 eq	0,012506931
TOTAL		kg SO2 eq	0,220587757



Impact category	Substance	Unit	Total
NON-RENEWABLE RESOURCES	Substancias remanentes	MJ eq	3,192333358
	Gas, natural, in ground	MJ eq	1455,944198
	Coal, 18 MJ per kg, in ground	MJ eq	652,4823141
	Oil, crude, in ground	MJ eq	544,2938108
	Coal, hard, unspecified, in ground	MJ eq	440,0160076
	Oil, crude, 42.6 MJ per kg, in ground	MJ eq	382,0111875
TOTAL		kg SO2 eq	4272,86497



WASTE	Total NO HAZARDOUS	KG	10,3
	Total HAZARDOUS	KG	0,018

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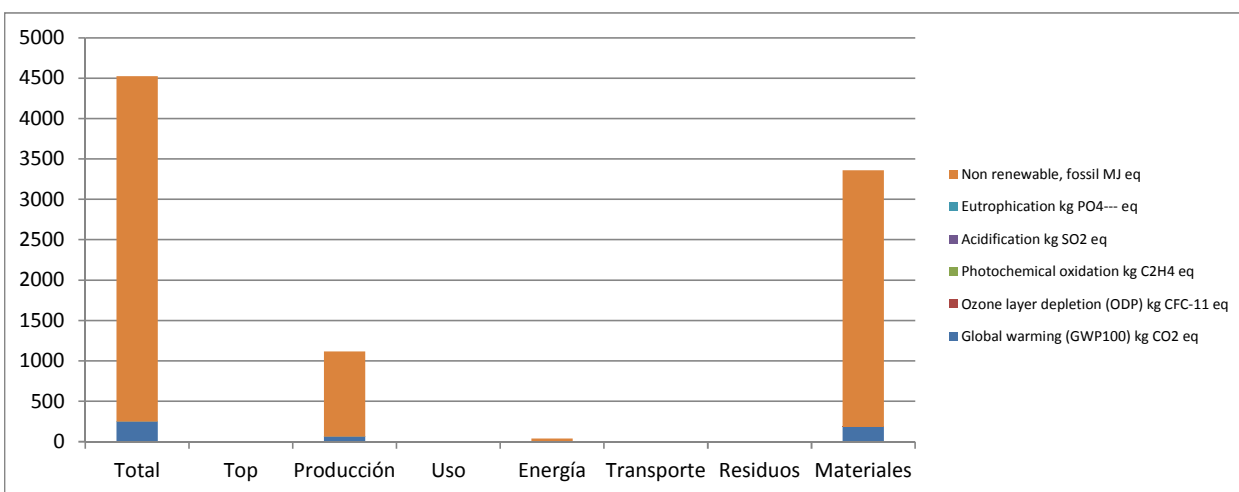
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5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Category	Uts.	Total	Top	Production	Use	Energy	Trsp.	Waste	Mat.
Global warming (GWP100)	kg CO2 eq	250,4879866	0	66,25658183	0	1,830580655	0,094	0	182,3
Ozone layer depletion (ODP)	kg CFC-11 eq	5,97319E-05	0	4,24704E-06	0	3,97254E-07	2E-09	0	6E-05
Photochemical oxidation	kg C2H4 eq	0,220587757	0	0,042721154	0	0,00134877	2E-04	0	0,176
Acidification	kg SO2 eq	1,221388992	0	0,213802764	0	0,011582452	0,001	0	0,995
Eutrophication	kg PO4--- eq	0,13997848	0	0,04658589	0	0,000460901	3E-04	0	0,093
Non renewable, fossil	MJ eq	4272,86497	0	1052,895934	0	40,71901778	0,039	0	3179



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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 ECODSIGN	CHOICES
Low impact materials selection	Designed to be manufactured with 48% recycled materials
	100% recycled aluminium
	Powder paint with no VOC emissions
	Limitation on use of hazardous substances. Without chromium, mercury, cadmium
	Board from recycled Wood fibers
	Adhesives for thickness table set without VOC contents.
Optimization of product techniques	Sustainable E1 Woods according to EN 13986 / low emissions that do not emit formaldehyde.
	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.
	Automated manufacturing systems. Planning the cutting process.
Optimization of product life	Reducing energy. Removable systems. Low volume packaging. Spaces optimization.
	Saving energy and Flexibility. Modular system adaptable between different models.
	Long life guarantees
	Adaptability and growth facilities.
Optimization of the end of system life	Replacement parts possibilities.
	Easy Maintenance
	Easy separation of product components
	High degree of recyclability of the product: 97%
	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 150301:2003 "Ecodesign".

ISO 14006 "Ecodesign"

ISO 14006 "Ecodesign"

Environmental impacts methods

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