

EPD Environmental Product Declaration

POWER 100

Ref. PW84000N

Report Data 08.12.2017

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 Spain



1. Details of the system

Type New Product ☒ Redesign ☐ Studied Year 2018

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
Aluminium	9,12	14,90%	Bibliographic data	Bibliographic data
Steel	20,684	33,79%	Bibliographic data	Bibliographic data
Plastic	1,0178	1,66%	Bibliographic data	Bibliographic data
Wood	22,81	37,26%	Bibliographic data	Bibliographic data
Others	0,565	0,92%	Bibliographic data	Bibliographic data
Corrugated Board	7,02	11,47%	Bibliographic data	Bibliographic data
TOTAL	61,2168	100,00%		
% recycled materials		56,17%		
% recyclable materials		97,41%		

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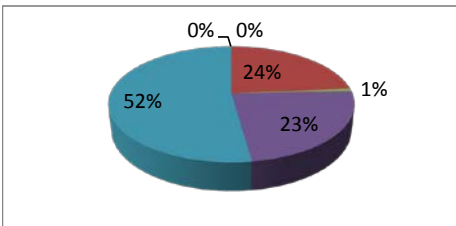
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3. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

Impact category

ACIDIFICATION

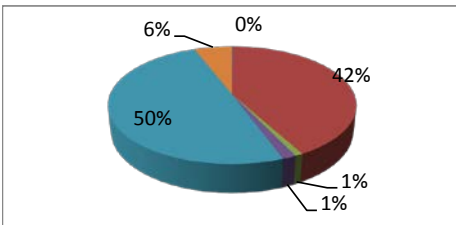


Substance	Unit	Total
Remaining Substances	kg SO2 eq	2,22045E-16
Ammonia	kg SO2 eq	0,258108862
Nitrogen dioxide	kg SO2 eq	0,008005503
Nitrogen oxides	kg SO2 eq	0,257740208
Sulfur dioxide	kg SO2 eq	0,571543307

TOTAL **kg SO2 eq** **1,692822925**

Impact category

EUTROFIZATION

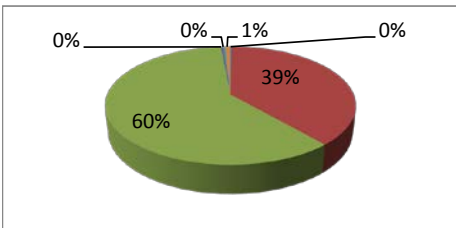


Substance	Unit	Total
Remaining Substances	kg PO4--- eq	0,000182601
Ammonia	kg PO4--- eq	0,056461314
Dinitrogen monoxide	kg PO4--- eq	0,001160578
Nitrogen dioxide	kg PO4--- eq	0,002081431
Nitrogen oxides	kg PO4--- eq	0,067012454
Ammonium, ion	kg PO4--- eq	0,007975315

TOTAL **kg SO2 eq** **0,178172547**

Impact category

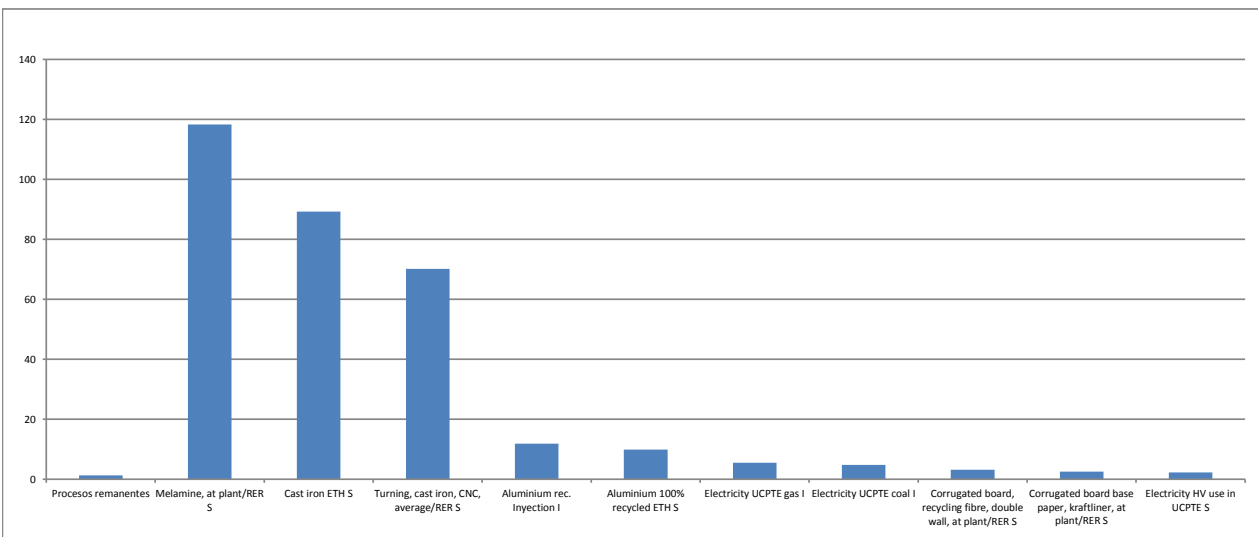
GLOBAL WARMING



Substance	Unit	Total
Remaining Substances	kg CO2 eq	0,711100819
Carbon dioxide	kg CO2 eq	117,0520402
Carbon dioxide, fossil	kg CO2 eq	182,6430731
Carbon monoxide	kg CO2 eq	0,869080228
Carbon monoxide, fossil	kg CO2 eq	1,102883414
Dinitrogen monoxide	kg CO2 eq	2,642546888

TOTAL **kg SO2 eq** **324,4341447**

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



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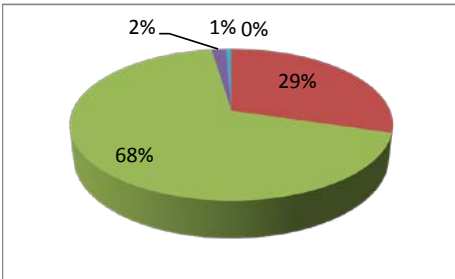
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4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

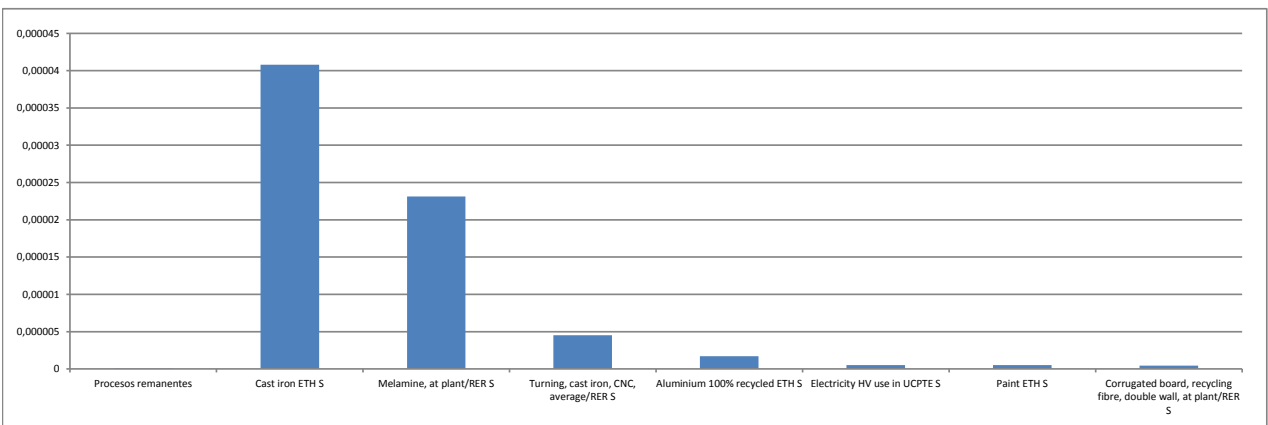
Impact category

REDUCING OZONE



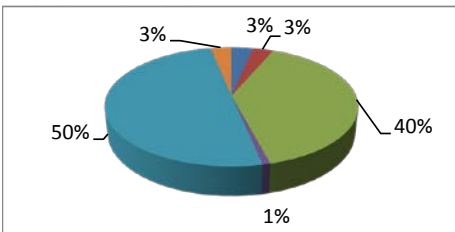
Substance	Unit	Total
Remaining Substances	kg CFC-11 eq	2,33378E-09
Methane, bromochlorodifluoro-, Halon 1211	kg CFC-11 eq	2,14557E-05
Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	4,92395E-05
Methane, chlorodifluoro-, HCFC-22	kg CFC-11 eq	1,21869E-06
Methane, tetrachloro-, CFC-10	kg CFC-11 eq	5,0406E-07
Methane, trichlorofluoro-, CFC-11	kg CFC-11 eq	9,27372E-08
TOTAL	kg SO2 eq	7,2513E-05

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



Impact category

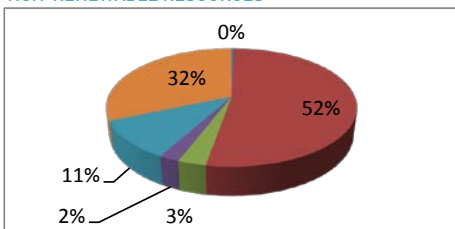
PHOTOCHEMICAL SMOG



Substance	Unit	Total
Remaining Substances	kg C2H4 eq	0,001244992
Butane	kg C2H4 eq	0,001173604
Carbon monoxide	kg C2H4 eq	0,014945966
Carbon monoxide, biogenic	kg C2H4 eq	0,000317749
Carbon monoxide, fossil	kg C2H4 eq	0,018966785
Ethane	kg C2H4 eq	0,001194855
TOTAL	kg SO2 eq	0,295156555

Impact category

NON-RENEWABLE RESOURCES



Substance	Unit	Total
Remaining Substances	MJ eq	5,230487832
Coal, 18 MJ per kg, in ground	MJ eq	820,2990479
Coal, 29.3 MJ per kg, in ground	MJ eq	47,96704989
Coal, brown, 8 MJ per kg, in ground	MJ eq	34,67615525
Coal, brown, in ground	MJ eq	163,9759036
Coal, hard, unspecified, in ground	MJ eq	492,2509068
TOTAL	kg SO2 eq	5505,838232

WASTE

Total NO HAZARDOUS	KG	28,8
Total HAZARDOUS	KG	0,0217

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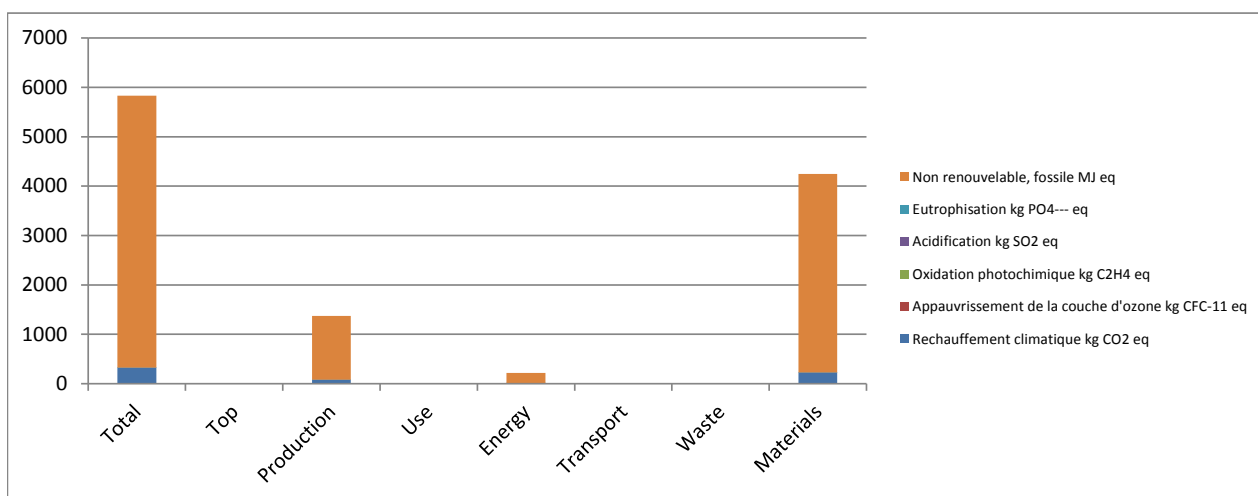
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5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Category	Uts.	Total	Top	Production	Use	Energy	Trsp.	Waste	Mat.
Rechauffement climatique	kg CO2 eq	324,4341447	0	82,73012739	0	13,72902232	0,544	0	227,4
Appauvrissement de la couche d'ozone	kg CFC-11 eq	7,2513E-05	0	4,5144E-06	0	1,11556E-06	1E-09	0	7E-05
Oxidation photochimique	kg C2H4 eq	0,295156555	0	0,068430371	0	0,005807753	8E-04	0	0,22
Acidification	kg SO2 eq	1,692822925	0	0,422736791	0	0,054371759	0,009	0	1,206
Eutrophisation	kg PO4--- eq	0,178172547	0	0,051778986	0	0,004090015	0,001	0	0,121
Non renouvelable, fossile	MJ eq	5505,838232	0	1287,179831	0	201,6182736	0,027	0	4017



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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	CHOICES
Low impact materials selection	Designed to be manufactured with 56% 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.
	Sustainable E1 Woods according to EN 13986 / low emissions that do not emit formaldehyde.
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.
	Automated manufacturing systems. Planning the cutting process.
	Reducing energy. Removable systems. Low volume packaging. Spaces optimization.
Optimization of product life	Saving energy and Flexibility. Modular system adaptable between different models.
	Long life guarantees
	Adaptability and growth facilities. Replacement parts possibilities.
	Easy Maintenance
Optimization of the end of system life	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.