

EPD Environmental Product Declaration

LONGO

Ref. CM653M19

Report Data 28.05.2015

Certificates

ISO 9001:2008

ISO 14001:2004

ISO 14006. Ecodesign

PEFC. Programme for the Endorsement of Forest Certification

FSC. Forest Stewardship Council



1. Details of the system

Type New Product ☒ Redesign ☐ Studied Year 2015

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
Carton	6,177	20,47%	Bibliographic data	Bibliographic data
Aluminium	15,473	51,27%	Bibliographic data	Bibliographic data
Steel	4,898	16,23%	Bibliographic data	Bibliographic data
Plastic	2,18	7,22%	Bibliographic data	Bibliographic data
Other	1,452	4,81%	Bibliographic data	Bibliographic data
TOTAL	30,18	100,00%		
% recycled materials		71,74%		
% recyclable materials		87,97%		

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".

This product has been manufactured at the facilities of ACTIU BERBEGAL Y FORMAS, S.A.

www.actiu.com

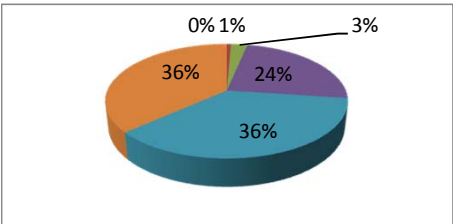
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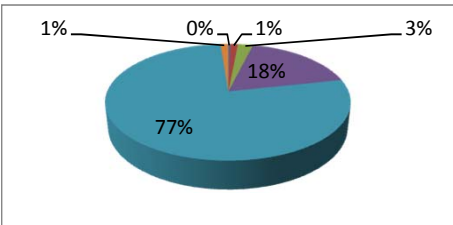
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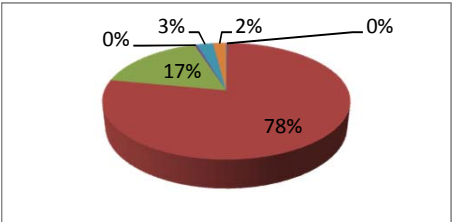
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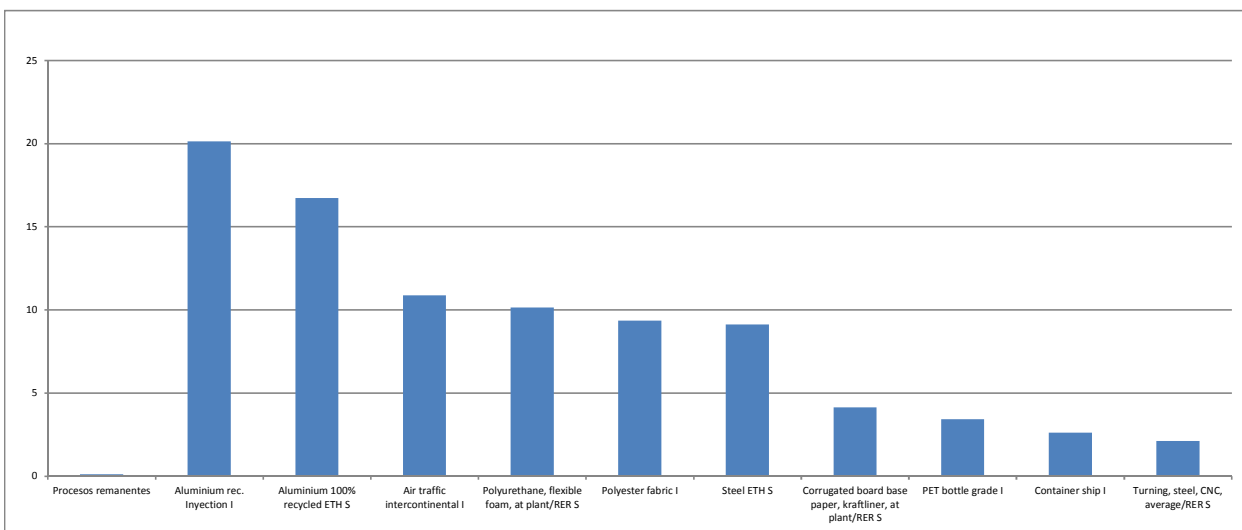
3. Impacts produced by category. Five substaces area included in each category have the greatest impact in each category

Impact category	Substance	Unit	Total
ACIDIFICATION			
	Substancias remanentes	kg SO2 eq	0
	Ammonia	kg SO2 eq	0,003982212
	Nitrogen dioxide	kg SO2 eq	0,01566688
	Nitrogen oxides	kg SO2 eq	0,143291538
	Sulfur dioxide	kg SO2 eq	0,218248597
	Sulfur oxides	kg SO2 eq	0,219962131
	TOTAL	kg SO2 eq	0,601151358

Impact category	Substance	Unit	Total
EUTROFIZATION			
	Substancias remanentes	kg P04--- eq	0,000124163
	Ammonia	kg P04--- eq	0,000533154
	Dinitrogen monoxide	kg P04--- eq	0,001025954
	Nitrogen dioxide	kg P04--- eq	0,007703322
	Nitrogen oxides	kg P04--- eq	0,033511725
	Ammonium, ion	kg P04--- eq	0,000532773
	TOTAL	kg P04--- eq	0,056671196

Impact category	Substance	Unit	Total
GLOBAL WARMING			
	Substancias remanentes	kg CO2 eq	0,167574172
	Carbon dioxide	kg CO2 eq	72,35194631
	Carbon dioxide, fossil	kg CO2 eq	15,81920203
	Carbon monoxide	kg CO2 eq	0,394953597
	Dinitrogen monoxide	kg CO2 eq	2,33601722
	Methane	kg CO2 eq	1,926425649
	TOTAL	kg CO2 eq	94,88279454

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



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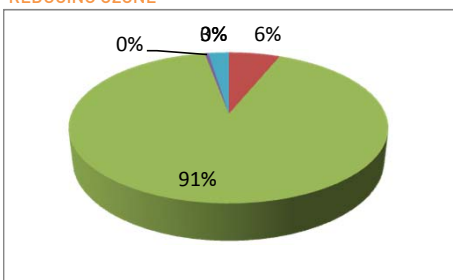
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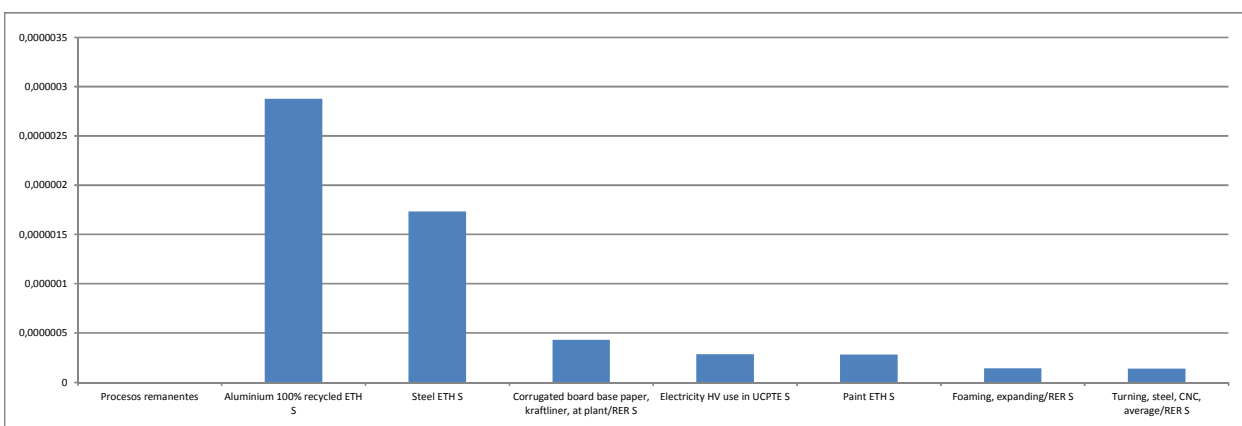
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4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

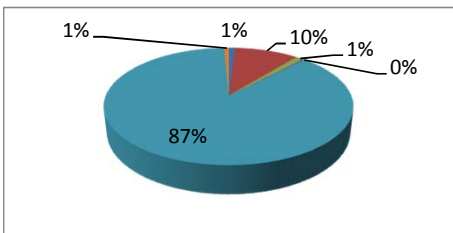
Impact category	Substance	Unit	Total
REDUCING OZONE	Substancias remanentes	kg CFC-11 eq	6,70971E-11
	Methane, bromochlorodifluoro-, Halon 1211	kg CFC-11 eq	3,65554E-07
	Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	5,36941E-06
	Methane, chlorodifluoro-, HCFC-22	kg CFC-11 eq	2,56599E-08
	Methane, tetrachloro-, CFC-10	kg CFC-11 eq	1,4579E-07
	Methane, trichlorofluoro-, CFC-11	kg CFC-11 eq	5,17054E-08
	TOTAL	kg CFC-11 eq	5,95819E-06



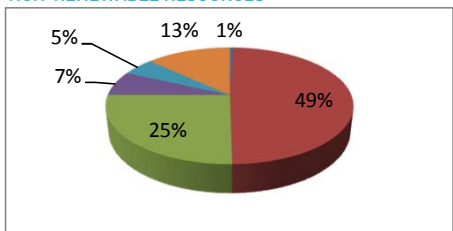
Impact of group elements (materials, processes, energy, use, transport and waste)



Impact category	Substance	Unit	Total
PHOTOCHEMICAL SMOG	Substancias remanentes	kg C2H4 eq	0,000659705
	Carbon monoxide	kg C2H4 eq	0,006792196
	Carbon monoxide, fossil	kg C2H4 eq	0,000851931
	Ethene	kg C2H4 eq	0,0001638
	Hydrocarbons, unspecified	kg C2H4 eq	0,059711424
	Methane	kg C2H4 eq	0,000502546
TOTAL	kg C2H4 eq	0,140277965	



Impact category	Substance	Unit	Total
NON-RENEWABLE RESOURCES	Substancias remanentes	MJ eq	1,206912128
	Coal, 18 MJ per kg, in ground	MJ eq	138,6643224
	Coal, 29.3 MJ per kg, in ground	MJ eq	71,07830836
	Coal, brown, 8 MJ per kg, in ground	MJ eq	19,17640314
	Coal, brown, in ground	MJ eq	13,80331216
	Coal, hard, unspecified, in ground	MJ eq	37,13607501
TOTAL	MJ eq	1418,254118	



WASTE	Total NO HAZARDOUS	KG	4,36
	Total HAZARDOUS	KG	0,11

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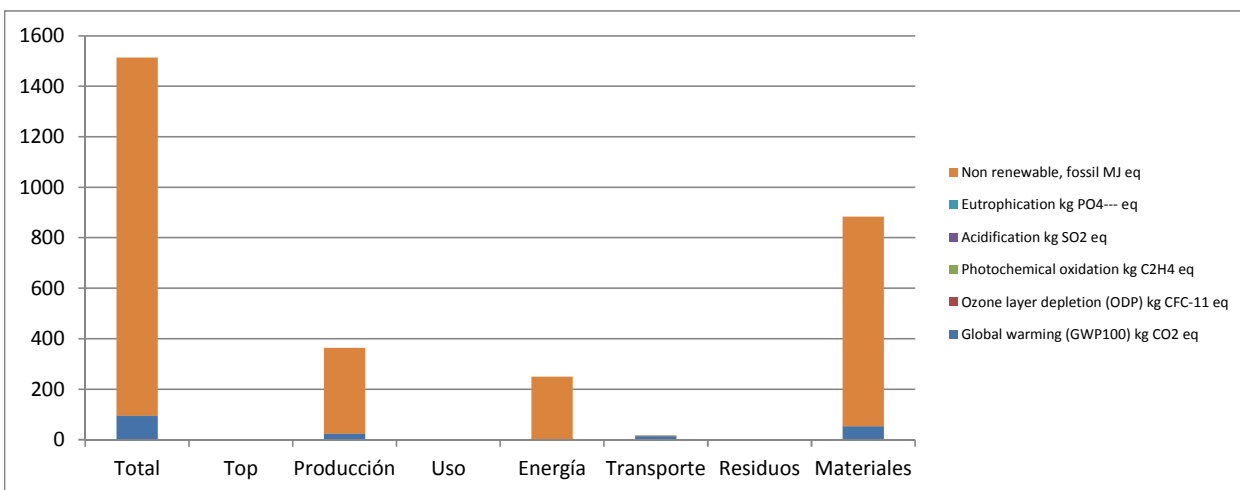
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5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Category	Uts.	Total	Top	Production	Use	Energy	Trsp.	Waste	Mat.
Global warming (GWP100)	kg CO2 eq	94,88279454	0	23,75514963	0	2,597188059	15	0	53,53
Ozone layer depletion (ODP)	kg CFC-11 eq	5,95819E-06	0	2,8718E-07	0	2,93015E-07	1E-09	0	5E-06
Photochemical oxidation	kg C2H4 eq	0,140277965	0	0,052642984	0	0,005645006	0,01	0	0,072
Acidification	kg SO2 eq	0,761225196	0	0,337289052	0	0,022185388	0,104	0	0,298
Eutrophication	kg PO4--- eq	0,056671196	0	0,005246961	0	0,002052316	0,015	0	0,034
Non renewable, fossil	MJ eq	1418,254118	0	340,2774961	0	247,9772052	0,027	0	830



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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 72% recycled materials
	100% recycled aluminium
	Powder paint with no VOC emissions
	Limitation on use of hazardous substances. Without chromium, mercury, cadmium
	Recycled cardboard packaging
Optimization of product techniques	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.
	Closed water circuits. Heat recovery.
Optimization of distribution system	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.
Optimization of the end of system life	Easy Maintenance
	Easy separation of product components
	High degree of recyclability of the product: 88%
	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.