EPD Environmental Product Declaration

STAY chair

Ref: 900213G13

Report Data 31.10.2012

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	X	Redesign		Studied Year 2012

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
Plástico	7,7204	33,38%	Bibliographic data	Bibliographic data
reciclable	8,962	38,75%	Bibliographic data	Bibliographic data
Cartón	2,825	12,21%	Bibliographic data	Bibliographic data
Acero	2,7076	11,71%	Bibliographic data	Bibliographic data
Varios	0,915	3,96%	Bibliographic data	Bibliographic data
TOTAL	**23,13**	**100,00%**		
% recicled materials		50,96%		
% reciclable materials		91,21%		

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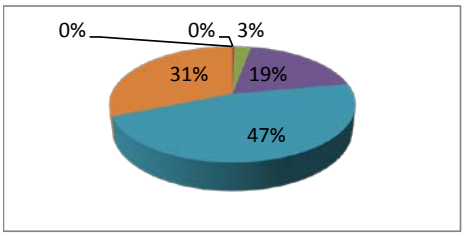
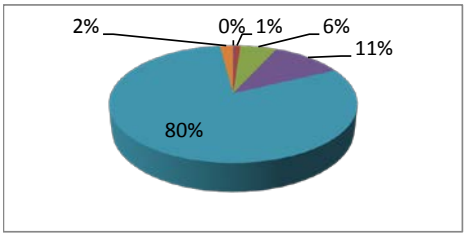
3. Impacts produced by category. Five substaces area included in each category have the greatest impact in each category

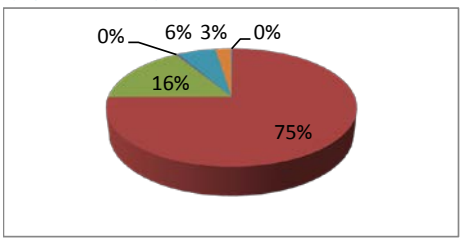
Impact category	Substance	Unit	Total
ACIDIFICATION	Remaining Substances	kg SO2 eq	0
	Ammonia	kg SO2 eq	0,001622994
	Nitrogen dioxide	kg SO2 eq	0,015177533
	Nitrogen oxides	kg SO2 eq	0,110125116
	Sulfur dioxide	kg SO2 eq	0,267899708
	Sulfur oxides	kg SO2 eq	0,178840761
	TOTAL	kg SO2 eq	0,573666112



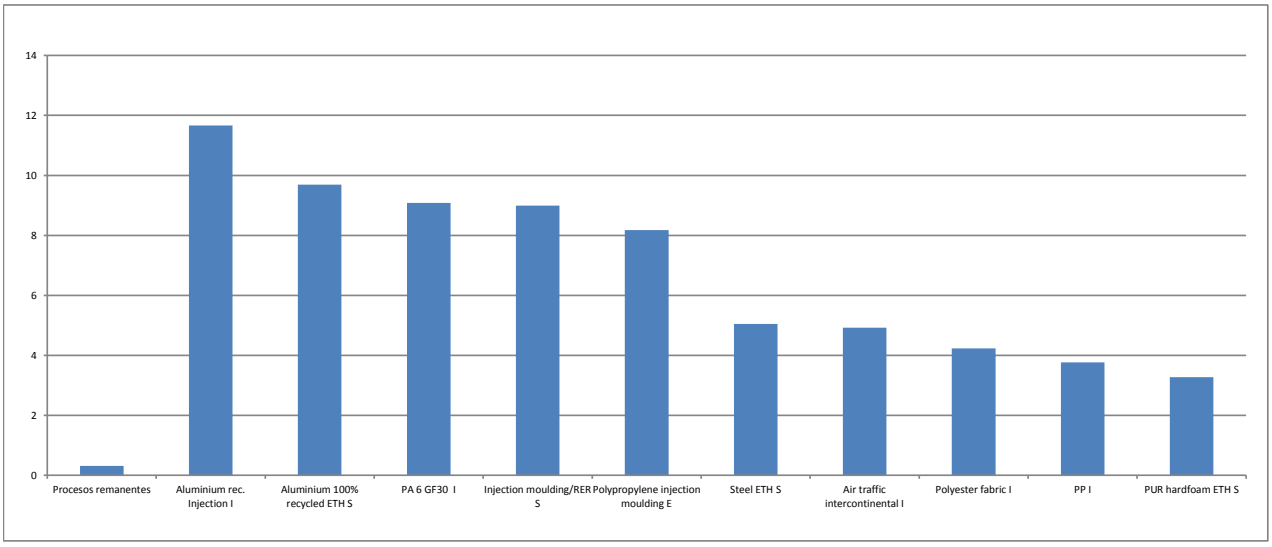
Impact category	Substance	Unit	Total
EUTROFIZATION	Remaining Substances	kg PO4--- eq	4,90277E-05
	Ammonia	kg PO4--- eq	0,00035503
	Dinitrogen monoxide	kg PO4--- eq	0,002032587
	Nitrogen dioxide	kg PO4--- eq	0,003946159
	Nitrogen oxides	kg PO4--- eq	0,02863253
	Ammonium, ion	kg PO4--- eq	0,000739632
	TOTAL	kg PO4--- eq	0,042795193



Impact category	Substance	Unit	Total
GLOBAL WARMING	Remaining 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-13	kg CO2 eq	1,980166265
	TOTAL	kg CO2 eq	81,79881909



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



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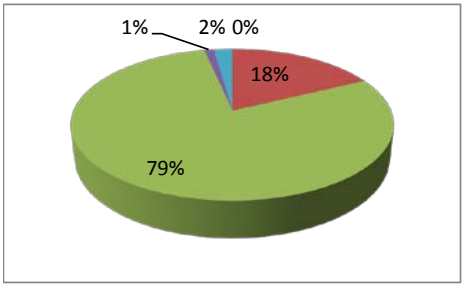
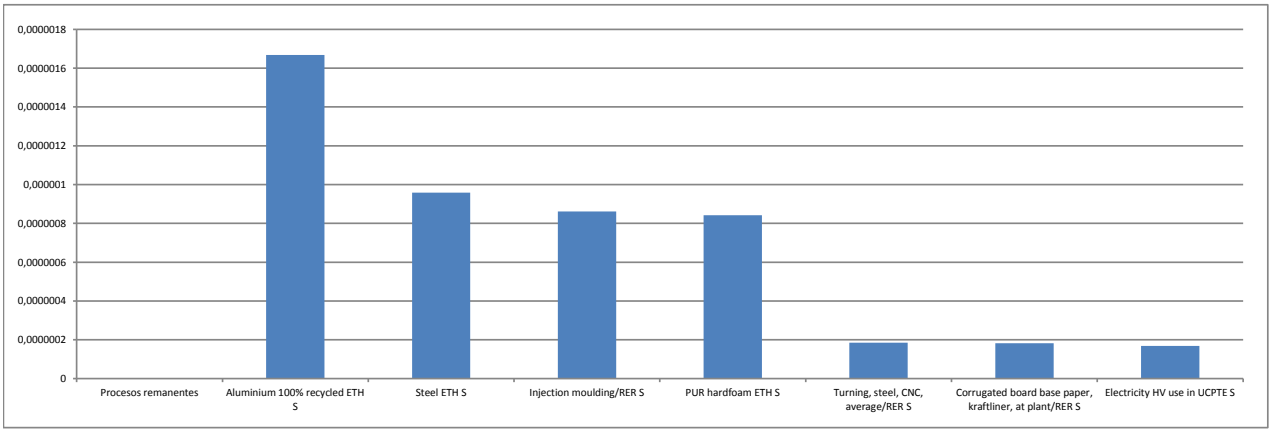
4. Impacts produced by category. Five substaces area included in each category have the greatest impact in each category

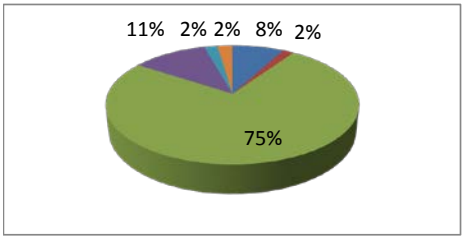
Impact category	Substance	Unit	Total
REDUCING OZONE	Remaining Substances	kg CFC-11 eq	3,40261E-11
	Methane, bromochlorodifluoro-, Halon 1211	kg CFC-11 eq	9,03575E-07
	Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	4,01158E-06
	Methane, chlorodifluoro-, HCFC-22	kg CFC-11 eq	5,69542E-08
	Methane, tetrachloro-, CFC-10	kg CFC-11 eq	1,13848E-07
	Methane, trichlorofluoro-, CFC-11	kg CFC-11 eq	3,42144E-08
	TOTAL	kg CFC-11 eq	5,12021E-06



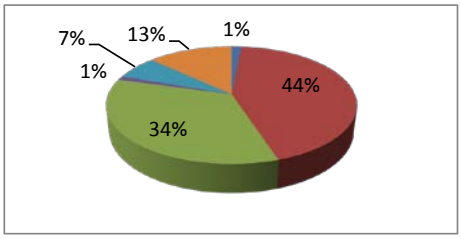
Impact of group elements (materials, processes, energy, use, transport and waste)



Impact category	Substance	Unit	Total
PHOTOCHEMICAL SMOG	Remaining 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 C2H4 eq	0,093671942



Impact category	Substance	Unit	Total
NON-RENEWABLE RESOURCES	Remaining 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 groun	MJ eq	2,247552
	Coal, brown, 8 MJ per kg, in ground	MJ eq	12,72588697
	Coal, brown, in ground	MJ eq	25,83560348
	TOTAL	MJ eq	1438,46298



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

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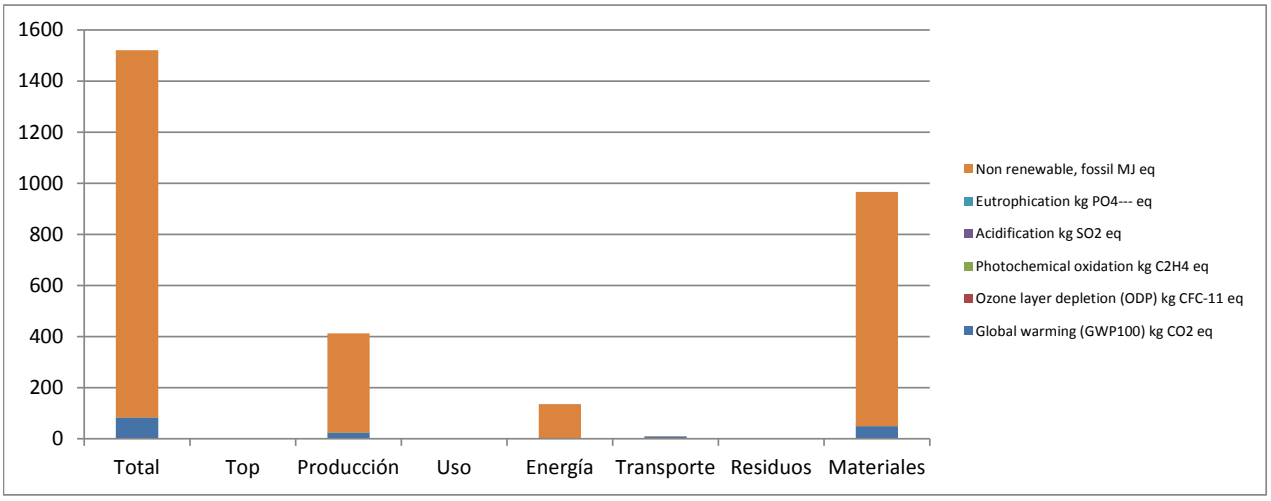
5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Categry	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



6. Ecodesign improvements considered.

ACTIU products are designed considering different environmental strategies. According to their level of complexitiy, 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 51% recycled materials
	100% recycled aluminium
	Powder paint with no VOC amissions
	Limitation on use of hazardous substances. Whithout 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.
	Automated manufacturing systems. Planning the cutting process.
Optimization of distribution system	Reducing energy. Removable systems. Low volume packaging. Spaces optimization.
	Saving energy and Flexibility. Modular system adaptable between diferent models.
Optimization of product life	Long life guarantees
	Adaptability and growth facilities.
	Replacement parts possibilities.
	Easy Maintenace
Optimization of the end of system life	Easy separation of product components
	High degree of recyclability of the product: 91%
	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 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.