

EPD Environmental Product Declaration

ARKITEK table

Ref. W19200

Report Data 20.03.2012

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 2009

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	30,763	59,64%	Bibliographic data	Bibliographic data
Steel	0,276	0,54%	Bibliographic data	Bibliographic data
Coarrugated Board	5,145	9,97%	Bibliographic data	Bibliographic data
Others	0,688	1,33%	Bibliographic data	Bibliographic data
Aluminium	14,154	27,44%	Bibliographic data	Bibliographic data
Plastic	0,557	1,08%	Bibliographic data	Bibliographic data
TOTAL	51,583	100,00%		
% recycled materials		85,12%		
% recyclable materials		97,59%		

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 150301:2003 "Ecodesign".

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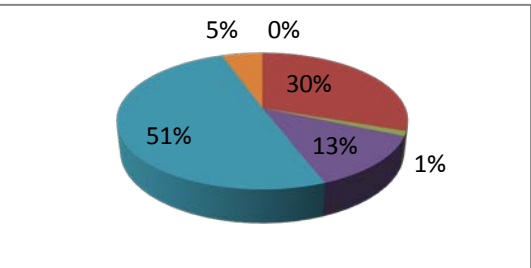
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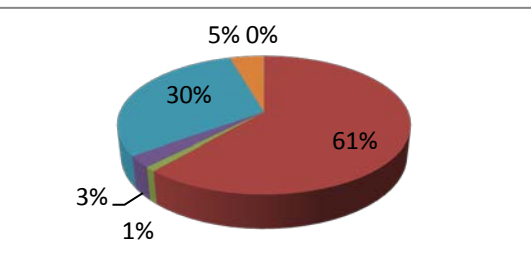
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3. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

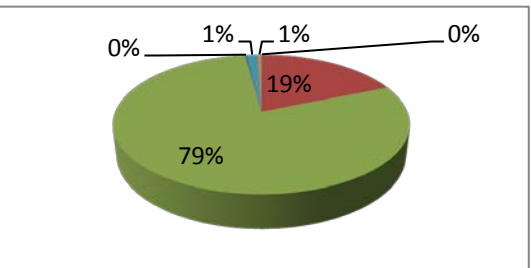
Impact category	Substance	Unit	Total
ACIDIFICATION	Remaining Substances	kg SO2 eq	0
	Ammonia	kg SO2 eq	0,326559898
	Nitrogen dioxide	kg SO2 eq	0,011876105
	Nitrogen oxides	kg SO2 eq	0,136210055
	Sulfur dioxide	kg SO2 eq	0,543199079
	Sulfur oxides	kg SO2 eq	0,057935749
	TOTAL	kg SO2 eq	1,075780887



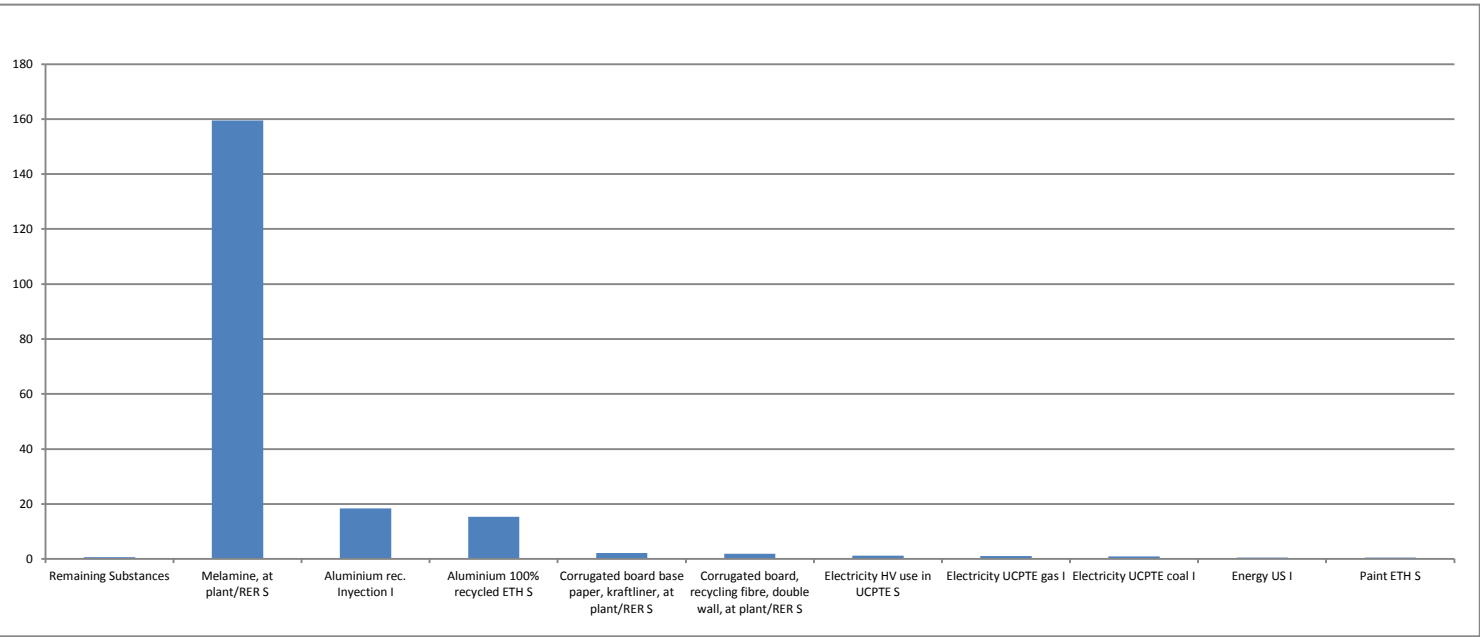
Impact category	Substance	Unit	Total
EUTROFIZATION	Remaining Substances	kg PO4--- eq	6,39101E-05
	Ammonia	kg PO4--- eq	0,071434978
	Dinitrogen monoxide	kg PO4--- eq	0,00119572
	Nitrogen dioxide	kg PO4--- eq	0,003087787
	Nitrogen oxides	kg PO4--- eq	0,035414614
	Ammonium, ion	kg PO4--- eq	0,005277338
	TOTAL	kg SO2 eq	0,131410225



Impact category	Substance	Unit	Total
GLOBAL WARMING	Remaining Substances	kg CO2 eq	0,358477233
	Carbon dioxide	kg CO2 eq	36,11297348
	Carbon dioxide, fossil	kg CO2 eq	153,4595654
	Carbon monoxide, fossil	kg CO2 eq	0,42990087
	Dinitrogen monoxide	kg CO2 eq	2,722563045
	Methane	kg CO2 eq	0,94227606
	TOTAL	kg SO2 eq	202,8586145



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



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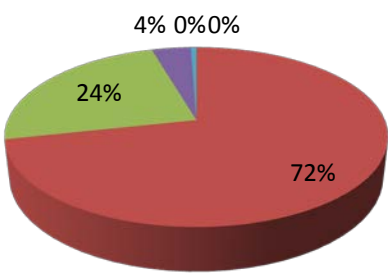
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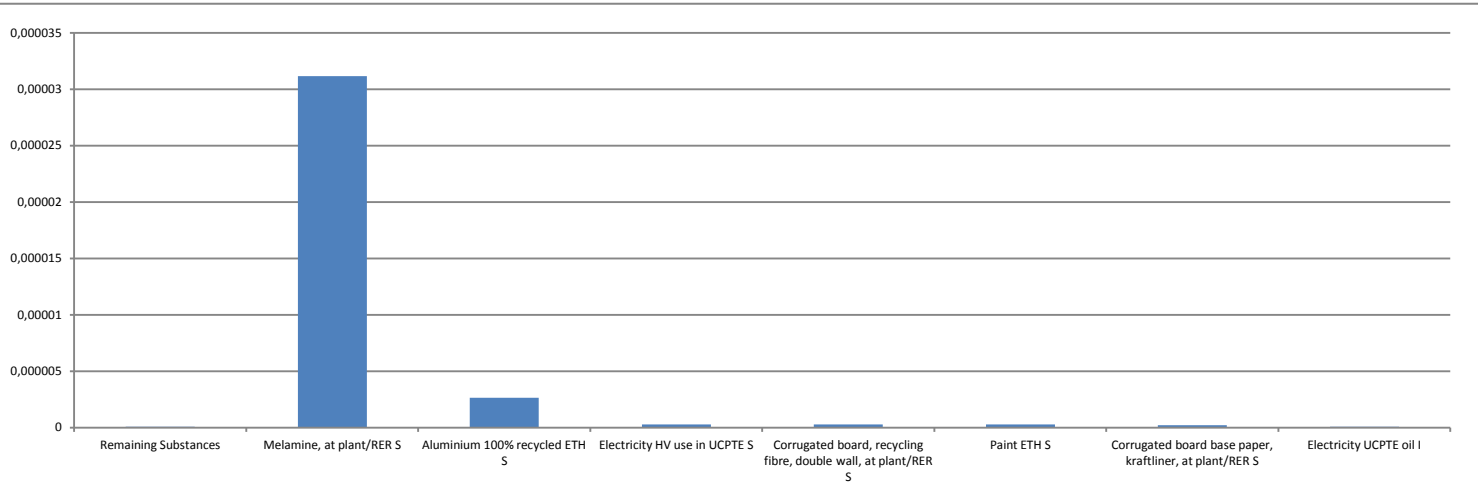
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4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

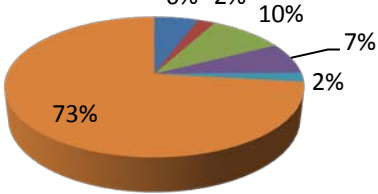
Impact category	Substance	Unit	Total
REDUCING OZONE	Substancias remanentes	kg CFC-11 eq	3,02821E-09
	Methane, bromochlorodifluoro-, HFC-1211	kg CFC-11 eq	2,5003E-05
	Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	8,35521E-06
	Methane, chlorodifluoro-, HCFC-22	kg CFC-11 eq	1,38227E-06
	Methane, tetrachloro-, CFC-11	kg CFC-11 eq	1,92329E-07
	Methane, trichlorofluoro-, CFC-11	kg CFC-11 eq	3,74316E-08
	TOTAL	kg SO2 eq	3,49733E-05



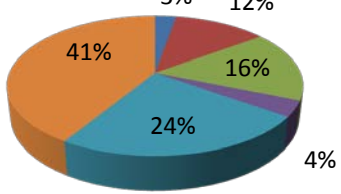
Impact of group elements (materials, processes, energy, use, transport and waste)



Impact category	Substance	Unit	Total
PHOTOCHEMICAL SMOG	Remaining Substances	kg C2H4 eq	0,000576168
	Benzene	kg C2H4 eq	0,000225275
	Butane	kg C2H4 eq	0,000966702
	Carbon monoxide	kg C2H4 eq	0,000734492
	Carbon monoxide, biogenic	kg C2H4 eq	0,000213354
	Carbon monoxide, fossil	kg C2H4 eq	0,0073932
	TOTAL	kg SO2 eq	0,132369657



Impact category	Substance	Unit	Total
NON-RENEWABLE RESOURCES	Remaining Substances	MJ eq	10,56514043
	Coal, 18 MJ per kg, in ground	MJ eq	46,00800504
	Coal, 29.3 MJ per kg, in ground	MJ eq	62,20119141
	Coal, brown, 8 MJ per kg, in ground	MJ eq	13,93034111
	Coal, brown, in ground	MJ eq	90,61810847
	Coal, hard, unspecified, in ground	MJ eq	156,8862971
	TOTAL	kg SO2 eq	3787,751783



WASTE	Total NO HAZARDOUS	KG	15,9
	Total HAZARDOUS	KG	0,0064

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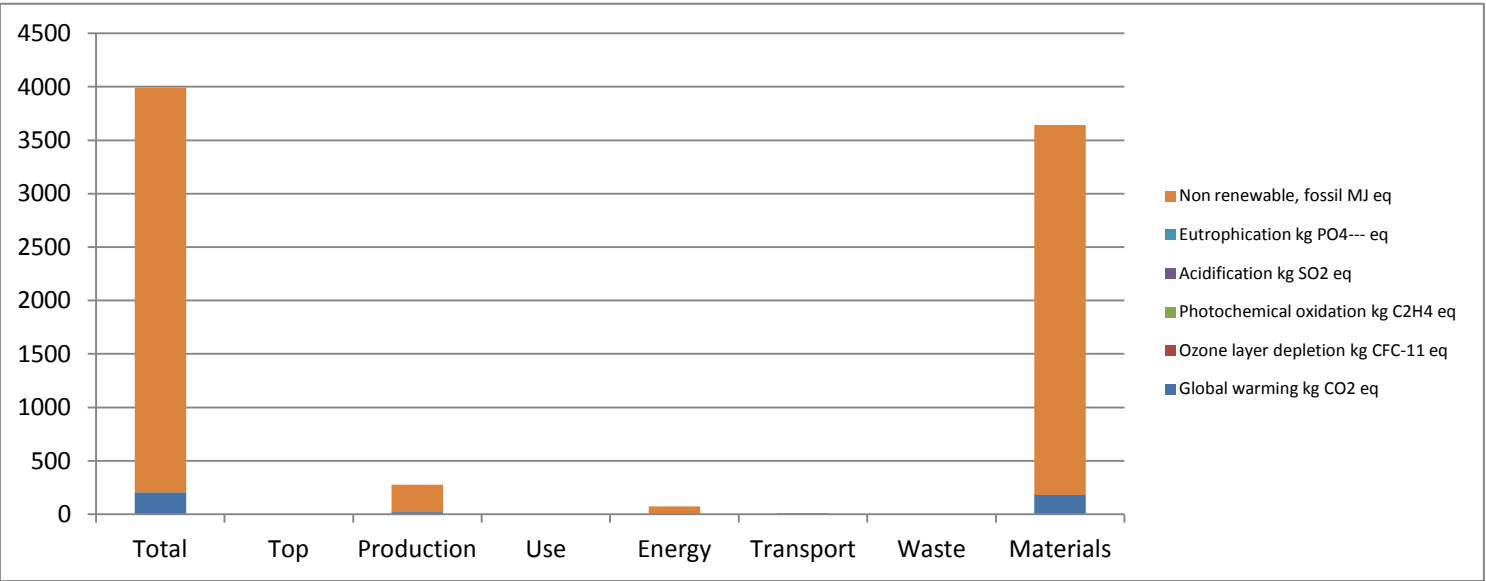
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5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Category	Uts.	Total	Top	Production	Use	Energy	Trsp.	Waste	Mat.
Global warming	kg CO2 eq	202,8586	0	18,48848	0	3,928487	0,625	0	179,8
Ozone layer depletion	kg CFC-11 eq	0,000035	0	0	0	0,000000388	1E-09	0	3E-05
Photochemical oxidation	kg C2H4 eq	0,13237	0	0,034406	0	0,001966	1E-03	0	0,095
Acidification	kg SO2 eq	1,075781	0	0,29654	0	0,017718	0,01	0	0,752
Eutrophication	kg PO4--- eq	0,13141	0	0,002998	0	0,001167	0,002	0	0,126
Non renewable, fossil	MJ eq	3787,752	0	257,3809	0	69,39856	0,023	0	3461





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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 85% recycled materials
	100% recycled aluminium
	Powder paint with no VOC amissions
	Limitation on use of hazardous substances. Whithout 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.
	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 diferent models.
	Long life guarantees
	Adaptability and growth facilities.
	Replacement parts possibilities.
Optimization of the end of system life	Easy Maintenace
	Easy separation of product components
	High degree of recyclability of the product: 98%
	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 14044:2006 "Environmental management. Life cycle analysis. Requirements and guidelines"

UNE 150301:2003 "Ecodesign"

Environmental impacts methods

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