

# EPD Environmental Product Declaration

## VITAL PLUS 60 table

Ref. HP6141000

Report Data 06.03.2012

### 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 2010

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
Wood	20,706	57,64%	Bibliographic data	Bibliographic data
Steel	9,3357	25,99%	Bibliographic data	Bibliographic data
Coarrugated Board	3,484	9,70%	Bibliographic data	Bibliographic data
Others	1,203	3,35%	Bibliographic data	Bibliographic data
Aluminium	0,701	1,95%	Bibliographic data	Bibliographic data
Plastic	0,4948	1,38%	Bibliographic data	Bibliographic data
<b>TOTAL</b>	<b>35,9245</b>	<b>100,00%</b>		
% recycled materials		57,76%		
% recyclable materials		95,27%		

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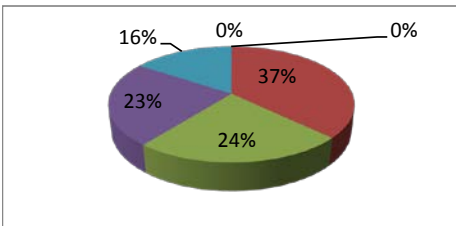
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### 3. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

#### Impact category

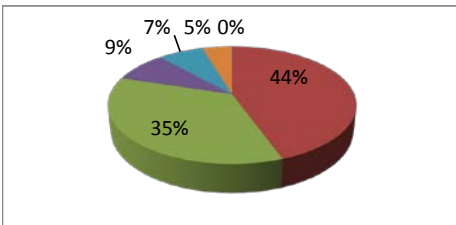
##### ACIDIFICATION



Substance	Unit	Total
Remaining Substances	kg SO2 eq	0,000727167
Sulfur oxides	kg SO2 eq	0,354982932
Sulfur dioxide	kg SO2 eq	0,226534513
Ammonia	kg SO2 eq	0,225804195
Nitrogen oxides	kg SO2 eq	0,151090219
<b>TOTAL</b>	<b>kg SO2 eq</b>	<b>0,959139025</b>

#### Impact category

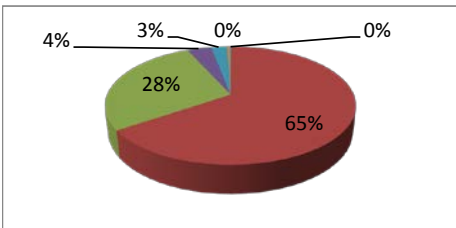
##### EUTROFIZATION



Substance	Unit	Total
Remaining Substances	kg PO4--- eq	8,48672E-05
Ammonia	kg PO4--- eq	0,049394668
Nitrogen oxides	kg PO4--- eq	0,039283457
Phosphate	kg PO4--- eq	0,009435224
COD, Chemical Oxygen Demand	kg PO4--- eq	0,007868609
Ammonium, ion	kg PO4--- eq	0,005205803
<b>TOTAL</b>	<b>kg SO2 eq</b>	<b>0,117419369</b>

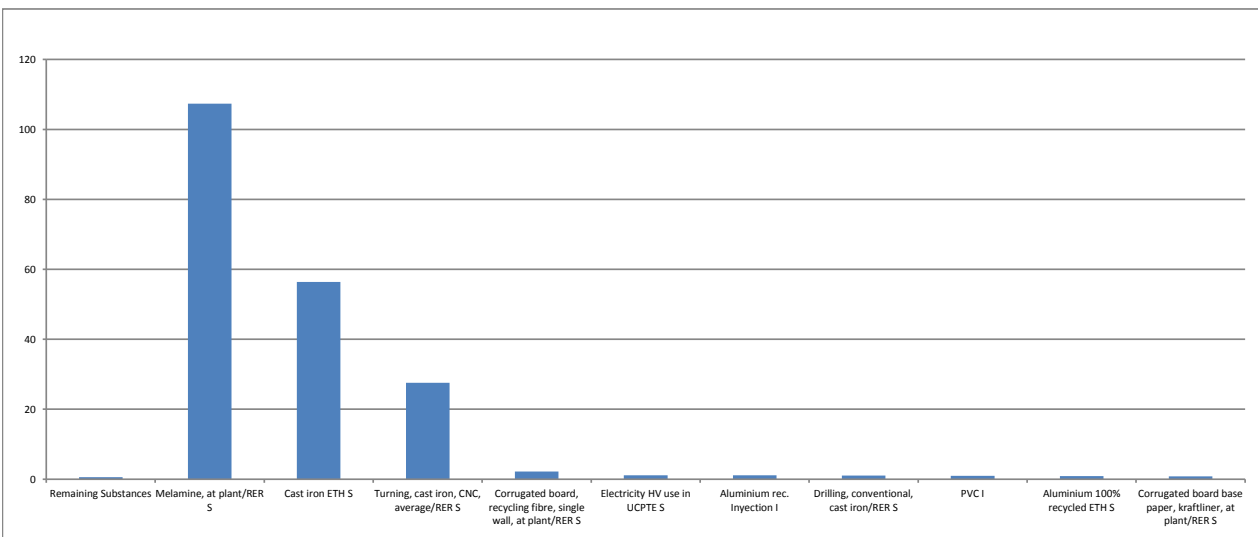
#### Impact category

##### GLOBAL WARMING



Substance	Unit	Total
Remaining Substances	kg CO2 eq	0,397479051
Carbon dioxide, fossil	kg CO2 eq	130,2946106
Carbon dioxide	kg CO2 eq	55,46086132
Methane, fossil	kg CO2 eq	7,422533091
Methane	kg CO2 eq	5,03468753
Dinitrogen monoxide	kg CO2 eq	0,978316517
<b>TOTAL</b>	<b>kg SO2 eq</b>	<b>200,7242712</b>

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



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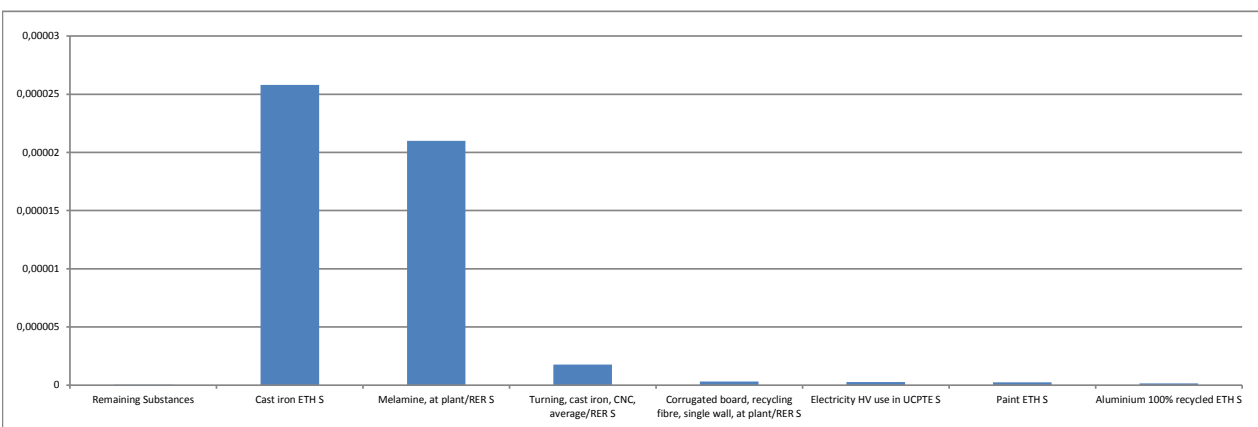
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### 4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

Impact category	Substance	Unit	Total
REDUCING OZONE	Remaining Substances	kg CFC-11 eq	4,84488E-08
	Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	3,03995E-05
	Methane, bromochlorodifluoro-, Halon 1211	kg CFC-11 eq	1,80097E-05
	Methane, chlorodifluoro-, HCFC-22	kg CFC-11 eq	1,01641E-06
	Methane, tetrachloro-, CFC-10	kg CFC-11 eq	2,62793E-07
	<b>TOTAL</b>	<b>kg SO2 eq</b>	<b>4,97369E-05</b>

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



Impact category	Substance	Unit	Total
PHOTOCHEMICAL SMOG	Remaining Substances	kg C2H4 eq	0,00068219
	NM VOC, non-methane volatile organics	kg C2H4 eq	0,104954504
	Sulfur oxides	kg C2H4 eq	0,017039181
	Sulfur dioxide	kg C2H4 eq	0,010873657
	Carbon monoxide, fossil	kg C2H4 eq	0,010471608
	Carbon monoxide	kg C2H4 eq	0,009060967
	<b>TOTAL</b>	<b>kg SO2 eq</b>	<b>0,166243223</b>

Impact category	Substance	Unit	Total
NON-RENEWABLE RESOURCES	Remaining Substances	MJ eq	3,930794774
	Gas, natural, in ground	MJ eq	1512,718548
	Oil, crude, in ground	MJ eq	508,0351632
	Coal, 18 MJ per kg, in ground	MJ eq	471,855724
	Oil, crude, 42.6 MJ per kg, in ground	MJ eq	274,8664691
	Coal, hard, unspecified, in ground	MJ eq	257,2253642
	<b>TOTAL</b>	<b>kg SO2 eq</b>	<b>3558,694251</b>

WASTE	Total NO HAZARDOUS	KG	15,12
	Total HAZARDOUS	KG	0,014

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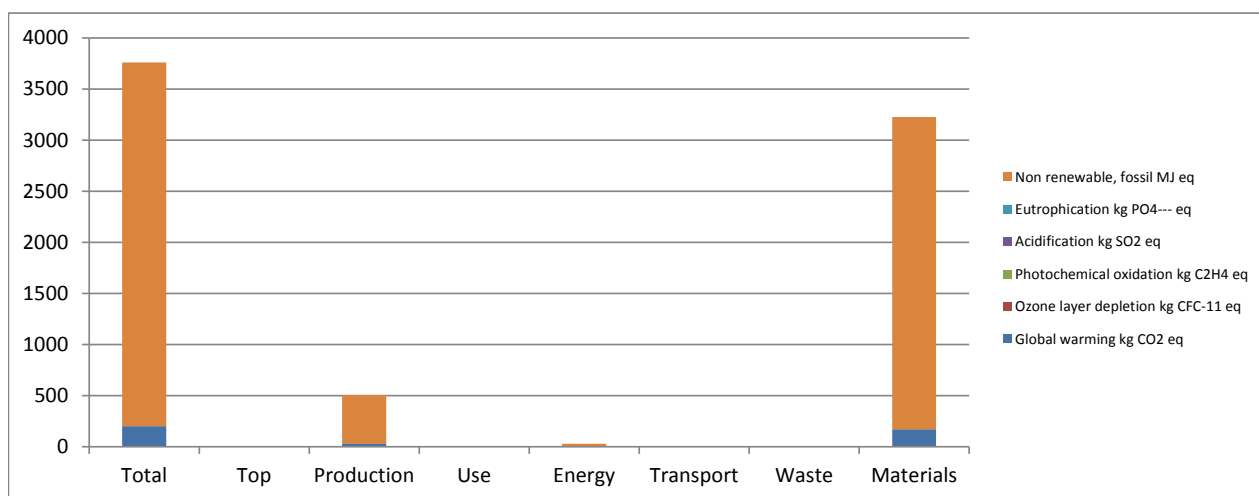
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### 5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

Impact Category	Uts.	Total	Top	Production	Use	Energy	Trsp.	Waste	Mat.
Global warming	kg CO2 eq	200,7243	0	29,83387	0	1,358652	0,043	0	169,5
Ozone layer depletion	kg CFC-11 eq	0,0000497	0	0,00000185	0	0,00000027	9E-10	0	5E-05
Photochemical oxidation	kg C2H4 eq	0,166243	0	0,020473	0	0,000935	7E-05	0	0,145
Acidification	kg SO2 eq	0,959139	0	0,10917	0	0,008172	7E-04	0	0,841
Eutrophication	kg PO4--- eq	0,117419	0	0,020487	0	0,000347	1E-04	0	0,096
Non renewable, fossil	MJ eq	3558,694	0	474,1536	0	28,57889	0,017	0	3056



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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 58% 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: 95%
	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.