

EPD Environmental Product Declaration

LONGO POD

Ref_LN6011M76M12

Report Data 05.12.2016

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 2016

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 100% rec.	23,952	8,92%	Bibliographic data	Bibliographic data
Steel	121,786	45,34%	Bibliographic data	Bibliographic data
Carton	32,121	11,96%	Bibliographic data	Bibliographic data
Polyester fabric	10,177	3,79%	Bibliographic data	Bibliographic data
TOTAL	188,036	70,01%		
% recycled materials		52,90%		
% recyclable materials		91,26%		

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

EPD Environmental Product Declaration

LONGO POD

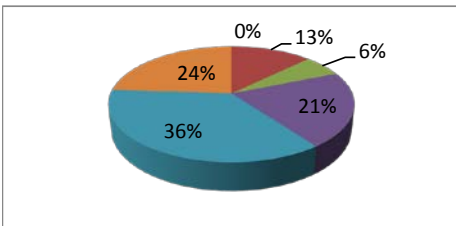
Ref_LN6011M76M12

Report Data 05.12.2016

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

Impact category

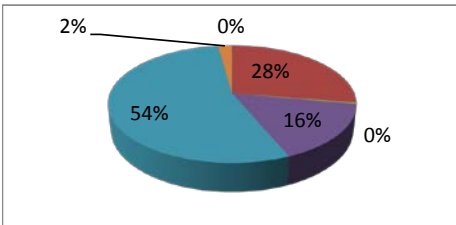
ACIDIFICATION



Substance	Unit	Total
Substances restantes	kg SO2 eq	0
Ammonia	kg SO2 eq	0,71565894
Nitrogen dioxide	kg SO2 eq	0,34564027
Nitrogen oxides	kg SO2 eq	1,18779421
Sulfur dioxide	kg SO2 eq	2,044784501
Sulfur oxides	kg SO2 eq	1,348607433
TOTAL	kg SO2 eq	5,642485354

Impact category

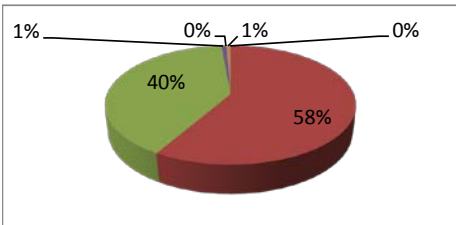
EUTROFIZATION



Substance	Unit	Total
Substances restantes	kg PO4--- eq	0,000586956
Ammonia	kg PO4--- eq	0,156550393
Dinitrogen monoxide	kg PO4--- eq	0,002263537
Nitrogen dioxide	kg PO4--- eq	0,08986647
Nitrogen oxides	kg PO4--- eq	0,308826495
Ammonium, ion	kg PO4--- eq	0,01247646
TOTAL	kg SO2 eq	0,637471975

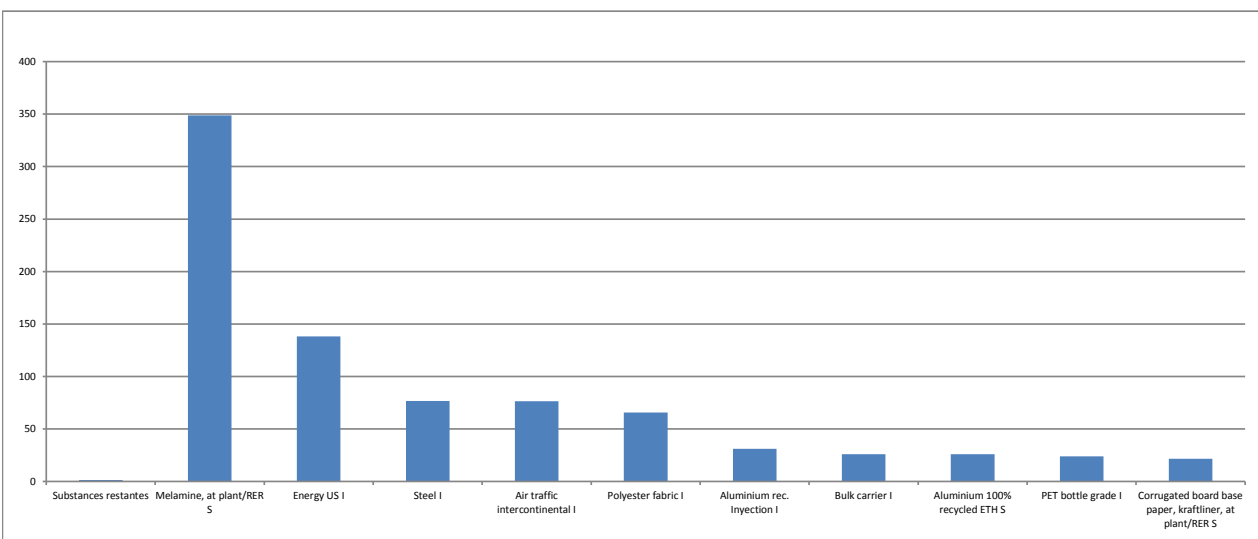
Impact category

GLOBAL WARMING



Substance	Unit	Total
Substances restantes	kg CO2 eq	0,826647393
Carbon dioxide	kg CO2 eq	531,2526128
Carbon dioxide, fossil	kg CO2 eq	366,270994
Carbon monoxide	kg CO2 eq	6,760403741
Carbon monoxide, fossil	kg CO2 eq	1,05364367
Dinitrogen monoxide	kg CO2 eq	5,153898923
TOTAL	kg CO2 eq	940,0375574

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



EPD Environmental Product Declaration

LONGO POD

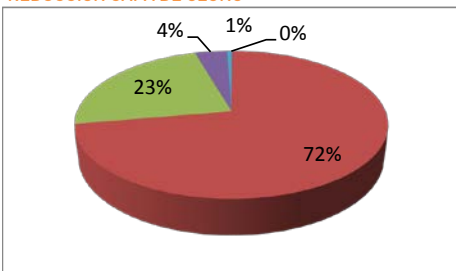
Ref_LN6011M76M12

Report Data 05.12.2016

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

Impact category

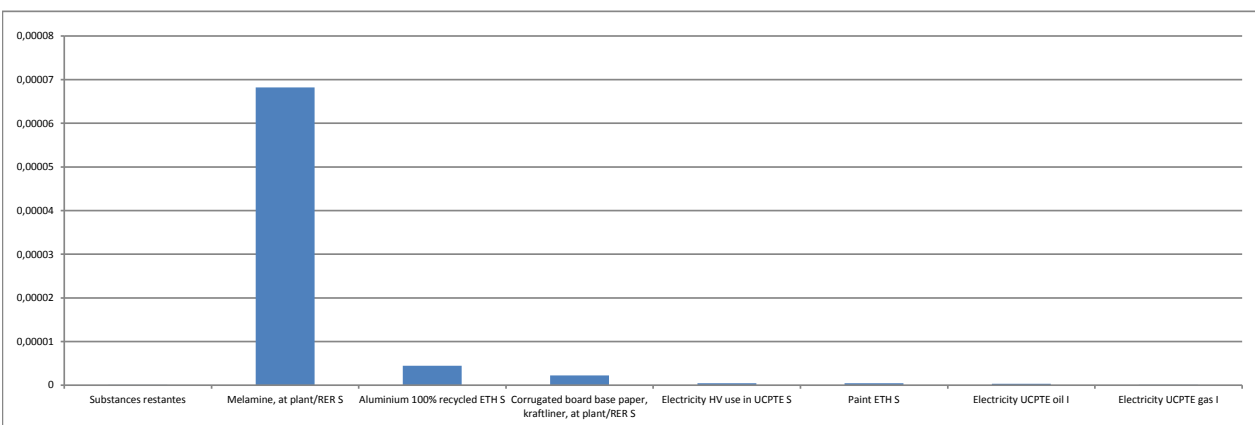
REDUCCIÓN CAPA DE OZONO



Substance	Unit	Total
Substancias restantes	kg CFC-11 eq	7,0022E-08
Methane, bromochlorodifluoro-, Halon 1211	kg CFC-11 eq	5,50829E-05
Methane, bromotrifluoro-, Halon 1301	kg CFC-11 eq	1,77229E-05
Methane, chlorodifluoro-, HCFC-22	kg CFC-11 eq	3,05382E-06
Methane, tetrachloro-, CFC-10	kg CFC-11 eq	3,91063E-07
0	0	0

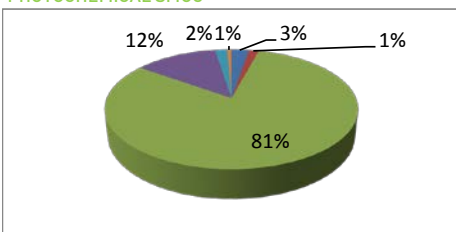
TOTAL **kg SO2 eq** **7,63208E-05**

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



Impact category

PHOTOCHEMICAL SMOG

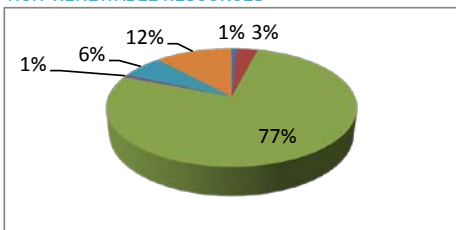


Substance	Unit	Total
Substancias restantes	kg C2H4 eq	0,003846018
Butane	kg C2H4 eq	0,002141211
Carbon monoxide	kg C2H4 eq	0,11626172
Carbon monoxide, fossil	kg C2H4 eq	0,018119987
Ethane	kg C2H4 eq	0,00273233
Formaldehyde	kg C2H4 eq	0,000884291

TOTAL **kg SO2 eq** **0,875211189**

Impact category

NON-RENEWABLE RESOURCES



Substance	Unit	Total
Substancias restantes	MJ eq	26,34348252
Coal, 18 MJ per kg, in ground	MJ eq	105,46627
Coal, 29.3 MJ per kg, in ground	MJ eq	2540,515718
Coal, brown, 8 MJ per kg, in ground	MJ eq	23,7308097
Coal, brown, in ground	MJ eq	211,9648678
Coal, hard, unspecified, in ground	MJ eq	392,245949

TOTAL **kg SO2 eq** **15841,40397**

WASTE

Total NO HAZARDOUS	KG	35,9
Total HAZARDOUS	KG	0,491

EPD Environmental Product Declaration

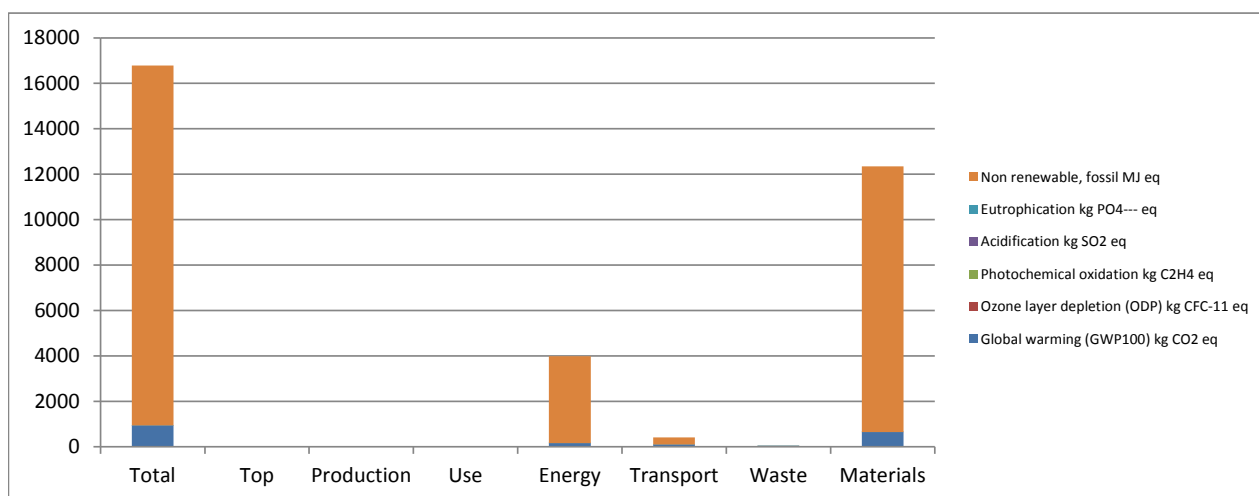
LONGO POD

Ref_LN6011M76M12

Report Data 05.12.2016

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	940,0375574	0	0	0	165,752491	106,2	26,03369684	642,1
Ozone layer depletion (ODP)	kg CFC-11 eq	7,63208E-05	0	0	0	9,51347E-07	3E-10	0	8E-05
Photochemical oxidation	kg C2H4 eq	0,875211189	0	0	0	0,076131118	0,076	0,037080829	0,686
Acidification	kg SO2 eq	5,642485354	0	0	0	0,765657582	0,728	0,660358864	3,488
Eutrophication	kg PO4--- eq	0,637471975	0	0	0	0,05462014	0,102	0,064021232	0,417
Non renewable, fossil	MJ eq	15841,40397	0	20,4502176	0	3816,339648	305,6	0	11699



EPD Environmental Product Declaration

LONGO POD

Ref_LN6011M76M12

Report Data 05.12.2016

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 53% recycled materials
	100% recycled aluminium
	Powder paint with no VOC emissions
	Limitation on use of hazardous substances. Without chromium, mercury, cadmium
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.
	Optimization of energy use in the manufacturing process: Heat recovery in the painting process, automated manufacturing systems to save energy.
	Embalaje en bultos planos para optimización espacio.
Optimization of product life	Sistema modular para máximo aprovechamiento y combinación de diferentes modelos del programa
	15 years minimum duration product
	Easy maintenance and cleaning of the product. It is easily cleaned with a damp cloth with water.
Optimization of the end of system life	The product is part of a modular program. Easy to modify, extend and repair to optimize its useful life.
	Easy separation of product components
	High degree of recyclability of the product: 91,27%
	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.