

EPD_Environmental Product Declaration

DESK_TALENT S500 ELEVATION 138x69 WHITE STRUCTURE

Ref_TL573L0011

Report Data12.11.2018

Certificates

ISO 9001

ISO 14001

ISO 14006. Ecodesign

PEFC. Programme for the Endorsement of Forest Certification

FSC®. Forest Stewardship Council

GBCe. Green Building Council Spain



1. Datos sobre el Sistema.

| | | | | | |
|------|-------------|-------------------------------------|----------|--------------------------|-------------------|
| Type | New Product | <input checked="" type="checkbox"/> | Redesign | <input type="checkbox"/> | Studied Year 2018 |
|------|-------------|-------------------------------------|----------|--------------------------|-------------------|

| | |
|--------------------|---|
| 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 environmental 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 |
| Aluminum 100% rec. | 6,068 | 23,28% | Bibliographic data | Bibliographic data |
| Steel | 0,078 | 0,30% | Bibliographic data | Bibliographic data |
| Varios plásticos | 2,976 | 11,42% | Bibliographic data | Bibliographic data |
| Melamine | 14,685 | 56,33% | Bibliographic data | Bibliographic data |
| Plastic LDPE | 1,621 | 6,22% | Bibliographic data | Bibliographic data |
| TOTAL | 25,428 | 97,54% | | |
| % recycled materials | | 62,99% | | |
| % recyclable materials | | 91,32% | | |

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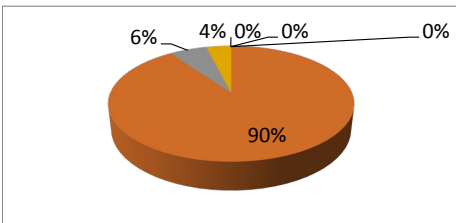
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3. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

Impact category

ACIDIFICATION

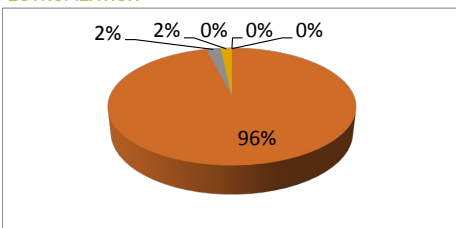


| Substance | Unit | Total |
|------------------------|-----------|-------------|
| Substancias remanentes | kg SO2 eq | 0 |
| Sulfur dioxide | kg SO2 eq | 0,372120343 |
| Ammonia | kg SO2 eq | 0,024302015 |
| Nitrogen dioxide | kg SO2 eq | 0,016212448 |
| Sulfur oxides | kg SO2 eq | 4,8239E-215 |
| Nitrogen oxides | kg SO2 eq | 0 |

TOTAL **kg SO2 eq** **0,127938094**

Impact category

EUTROFIZATION

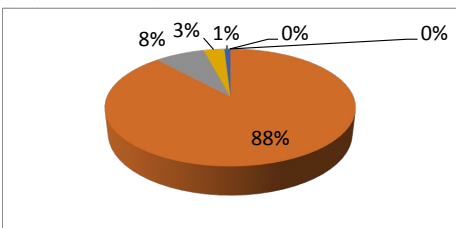


| Substance | Unit | Total |
|------------------------|--------------|-------------|
| Substancias remanentes | kg PO4--- eq | 0 |
| Nitrogen dioxide | kg PO4--- eq | 0,064324125 |
| Ammonia | kg PO4--- eq | 0,001493904 |
| Dinitrogen monoxide | kg PO4--- eq | 0,001180062 |
| Phosphorus, total | kg PO4--- eq | 4,8239E-215 |
| Nitrogen oxides | kg PO4--- eq | 4,8239E-215 |

TOTAL **kg SO2 eq** **0,001579386**

Impact category

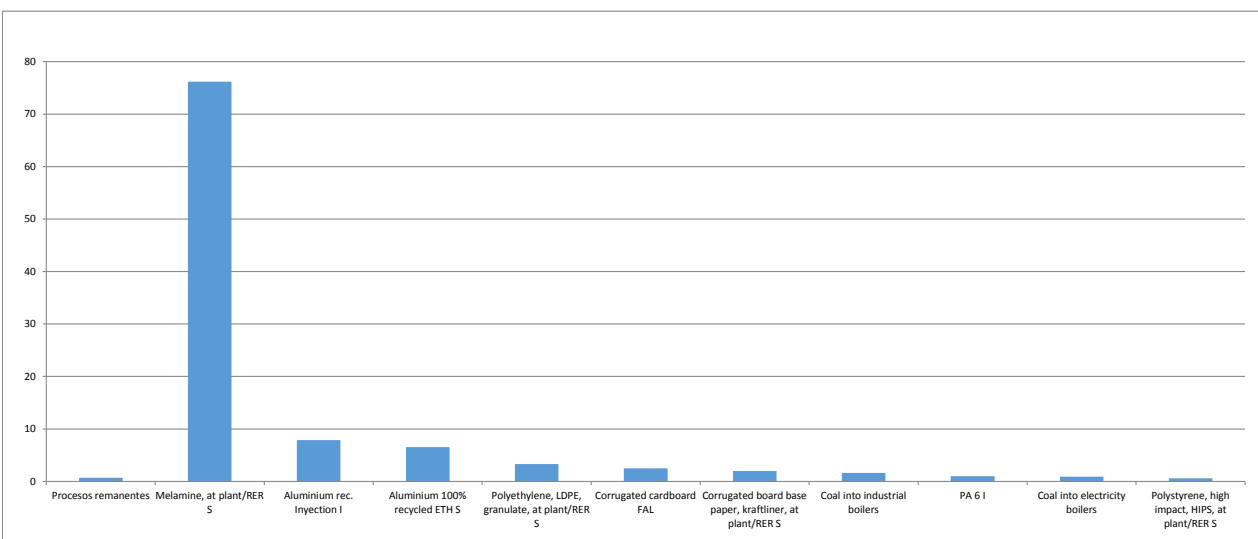
GLOBAL WARMING



| Substance | Unit | Total |
|------------------------|-----------|-------------|
| Substancias remanentes | kg CO2 eq | 0 |
| Dinitrogen monoxide | kg CO2 eq | 92,31693759 |
| Methane, fossil | kg CO2 eq | 8,070498449 |
| Carbon dioxide | kg CO2 eq | 3,368915904 |
| Carbon dioxide, fossil | kg CO2 eq | 0,960718291 |
| Methane | kg CO2 eq | 6,3538E-215 |

TOTAL **kg CO2 eq** **8,08101686**

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



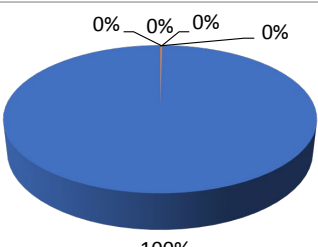
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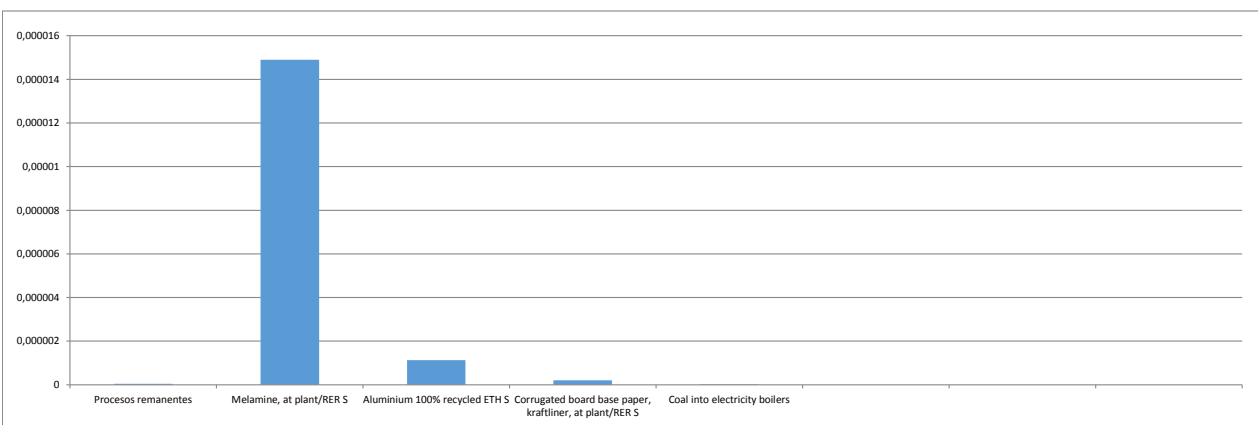
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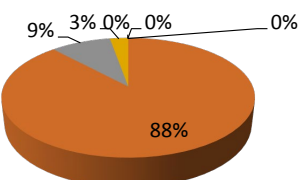
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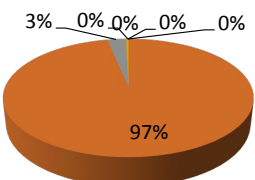
4. Impacts produced by category. Five substances area included in each category have the greatest impact in each category

| Impact category | Substance | Unit | Total |
|---|---|------------------|--------------------|
| REDUCING OZONE | | | |
|  | Substancias remanentes | kg CFC-11 eq | 0 |
| | Methane, bromochlorodifluoro-, Halon 1211 | kg CFC-11 eq | 3,19976E-08 |
| | Methane, bromotrifluoro-, Halon 1301 | kg CFC-11 eq | 5,1688E-09 |
| | Methane, chlorodifluoro-, HCFC-22 | kg CFC-11 eq | 0 |
| | Methane, tetrachloro-, CFC-10 | kg CFC-11 eq | 1,6236E-05 |
| | | | |
| | | | |
| TOTAL | | kg SO2 eq | 2,29613E-08 |

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



| Impact category | Substance | Unit | Total |
|---|---------------------------|------------------|--------------------|
| PHOTOCHEMICAL SMOG | | | |
|  | Substancias remanentes | kg C2H4 eq | 0 |
| | Carbon monoxide, biogenic | kg C2H4 eq | 0,053722759 |
| | Butane | kg C2H4 eq | 0,005579765 |
| | Benzene | kg C2H4 eq | 0,001706112 |
| | Methane, fossil | kg C2H4 eq | 4,8239E-215 |
| | Carbon monoxide, fossil | kg C2H4 eq | 4,8239E-215 |
| TOTAL | | kg SO2 eq | 0,015034693 |

| Impact category | Substance | Unit | Total |
|---|---------------------------------------|------------------|------------------|
| NON-RENEWABLE RESOURCES | | | |
|  | Substancias remanentes | MJ eq | 0 |
| | Coal, brown, 8 MJ per kg, in ground | MJ eq | 1802,982455 |
| | Coal, 26.4 MJ per kg, in ground | MJ eq | 53,96839828 |
| | Coal, 18 MJ per kg, in ground | MJ eq | 6,787625745 |
| | Oil, crude, 42.6 MJ per kg, in ground | MJ eq | 4,8239E-215 |
| | Coal, brown, in ground | MJ eq | 4,8239E-215 |
| TOTAL | | kg SO2 eq | 107,79066 |

WASTE

| | | |
|--------------------|----|-------|
| Total NO HAZARDOUS | KG | 8,13 |
| Total HAZARDOUS | KG | 0,011 |

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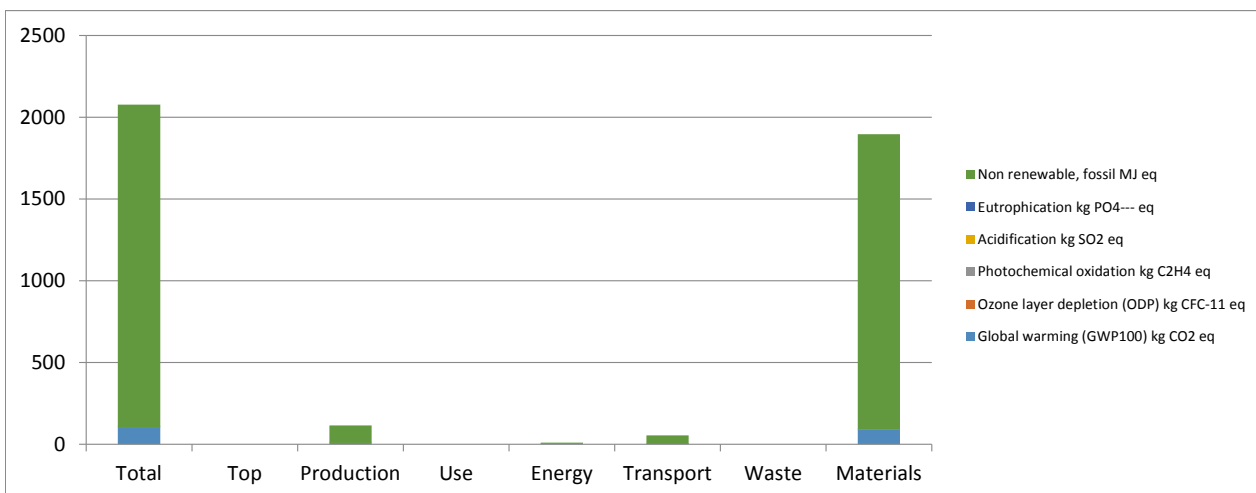
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5. Impact produced by life cycle stage. In includes six stages: Production, Use, Energy, Transport, Waste and Materials.

| Impact Category | Uts. | Total | Top | Production | Use | Energy | Trsp. | Waste | Mat. |
|-----------------------------|--------------|-------------|-----|-------------|-----|-------------|-------|-------|-------|
| Global warming (GWP100) | kg CO2 eq | 104,7275886 | 0 | 8,08101686 | 0 | 3,368915904 | 0,961 | 0 | 92,32 |
| Ozone layer depletion (ODP) | kg CFC-11 eq | 1,62962E-05 | 0 | 2,29613E-08 | 0 | 3,19976E-08 | 5E-09 | 0 | 2E-05 |
| Photochemical oxidation | kg C2H4 eq | 0,07604333 | 0 | 0,015034693 | 0 | 0,001706112 | 0,006 | 0 | 0,054 |
| Acidification | kg SO2 eq | 0,5405729 | 0 | 0,127938094 | 0 | 0,024302015 | 0,016 | 0 | 0,372 |
| Eutrophication | kg PO4--- eq | 0,068577478 | 0 | 0,001579386 | 0 | 0,001493904 | 0,001 | 0 | 0,064 |
| Non renewable, fossil | MJ eq | 1971,529139 | 0 | 107,79066 | 0 | 6,787625745 | 53,97 | 0 | 1803 |



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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 62,99% 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 |
| | Painting processes of high technology systems. |
| | Recovery unused paint in the process. Zero emissions of VOCs. |
| | Recovery of paint not used in the process for reuse. |
| Optimization of distribution system | Metal cleaning by closed water circuit |
| | Optimization of energy use in the manufacturing process: Heat recovery in the painting process, automated manufacturing systems to save energy. |
| | Packing in flat packages for space optimization. |
| Optimization of product life | Modular system for maximum use and combination of different program models |
| | 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: 91,32% |
| | Packaging reuse system between ACTIU and its providers to avoid waste generation |

Bibliography and references

ISO 14025 Environmental labels and declarations – Type III

ISO 14044:2006 "Environmental management. Life cycle analysis. Requirements and guidelines"

UNE - EN ISO 14006:2011 "Environmental management systems. Guidelines for the incorporation of ecodesign"

Methods for calculating environmental impacts

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