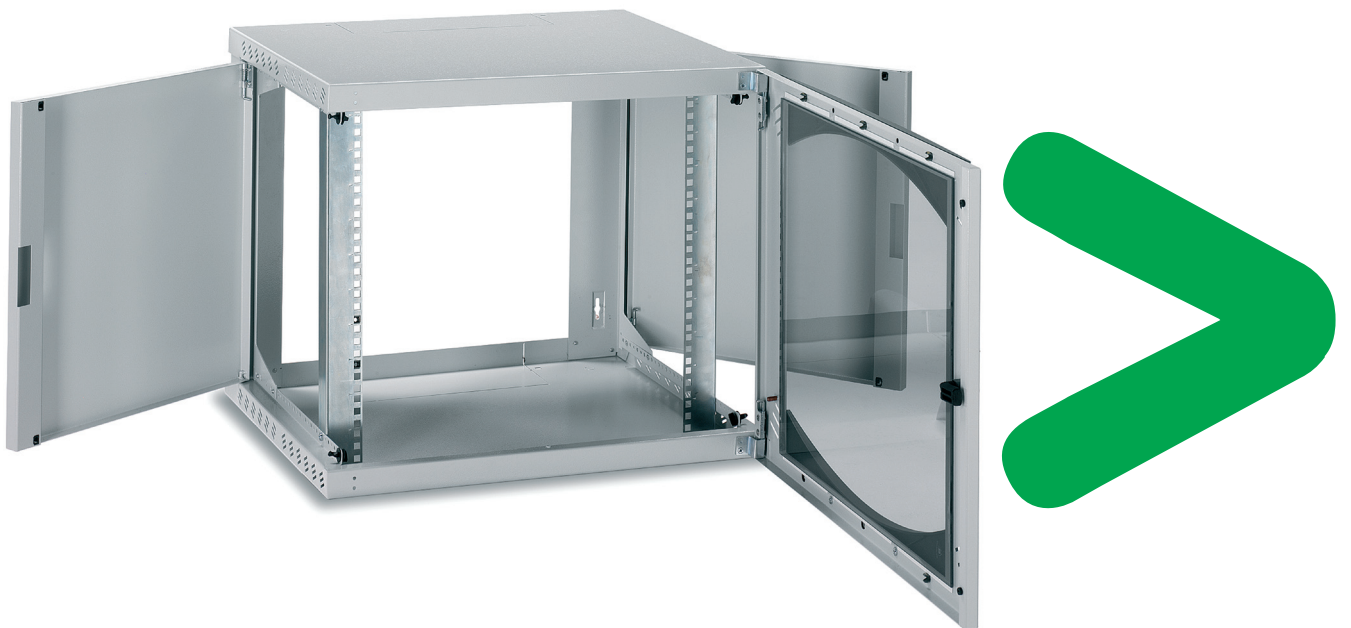


Product Environmental Profile

CaSys.OPB 19" Enclosure



Product Environmental Profile – PEP

The range CaSys.OPB 19” enclosure has for main function to protect electrical equipments (computers, telecommunications, brewing...) that it receives. This range is composed of enclosures from 6 U to 21 U.

The representative product used to make the study is CaSys.OPB 19” enclosure with swing rack 6 U 380*600*400 (Ref.: NSYOPB6U64).

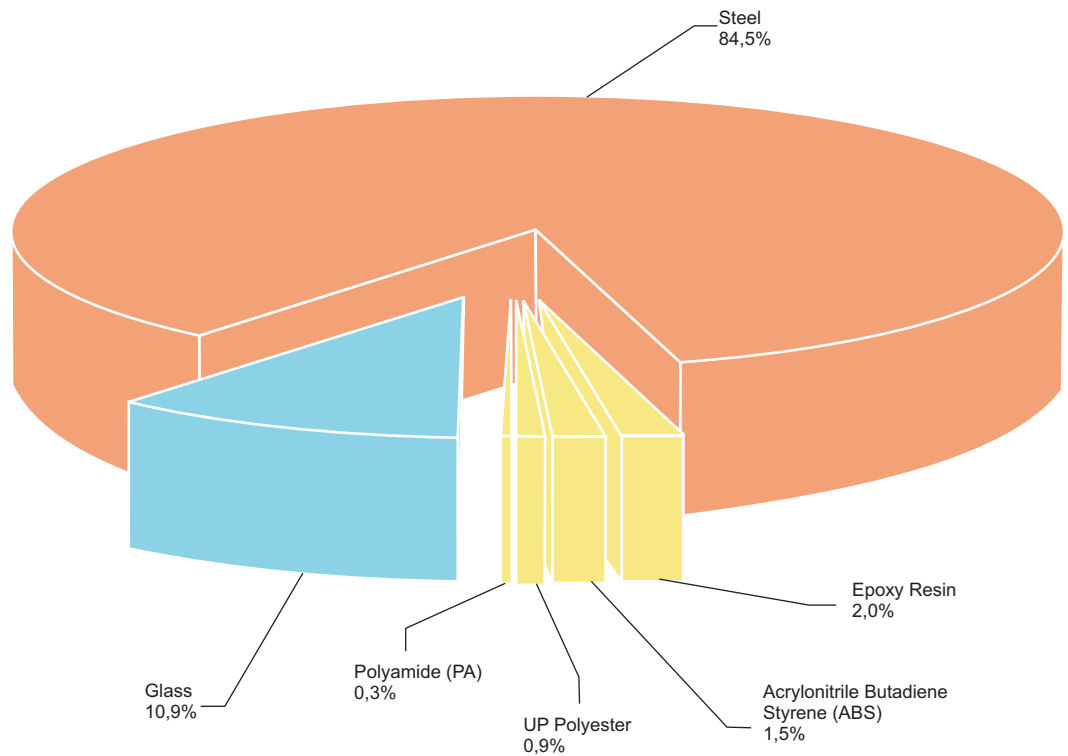
Environmental impacts of this product took in reference, are representative of the impacts of other products of the range, produced with the same technology. The environmental analysis has been realized in conformity with ISO14040 standard “Environmental management: life cycle analysis, principle and frame”. This analysis takes into account the stages of the life cycle of the product.

Constitutive materials

The weight of each product of the range is spread from 15 kg to 35 kg without packaging. It is 15 kg for the CaSys.OPB 19” enclosure with swing rack 6 U 380*600*400 analyzed.

The constituent materials are distributed like this:

Class	Matters	Weight (g)	%
Metals	Steel	12366,0	84,5%
	Epoxy Resin	286,9	2,0%
Plastic	Acrylonitrile Butadiene Styrene (ABS)	215,8	1,5%
	UP Polyester	124,7	0,9%
	Polyamide (PA)	41,1	0,3%
	Glass	1595,4	10,9%
Other	Total	14640,9	99,9%



Product Environmental Profile – PEP

All necessary measures are taken by our services, suppliers and subcontractors to ensure that materials used in composition of the range CaSys.OPB 19" enclosure contain no substance banned by the rule when it is placed on the market.

The products of the range are designed in accordance with the requirements of the ROHS directive, (Directive 2002/95/EC of January 27, 2003) and do not contain, over thresholds allowed, lead, mercury, cadmium, hexavalent chromium, or flame retardants (polybrominated diphenyl PBD, polybrominated diphenyl ether PBDE) as mentioned in the directive.

Manufacturing

The range CaSys.OPB 19" enclosure is manufactured in a Schneider Electric production site which has setting up an environmental management system certified ISO14001.

Distribution

Packages have been designed to reduce their weight and volume, according to the packaging directive of the European Union.

The weight of the CaSys.OPB 19" enclosure with swing rack 6 U 380*600*400 packaging is 3075 g. It is composed of cardboard (1710 g), wood (1305 g) and polyethylene (60.5 g).

The flows of products distribution are optimized by the establishment of local distribution centres near the local market areas.

Use

CaSys.OPB 19" enclosures products do not present nuisances involving special precautions (noise, emissions...).

End of life

At the end of life, products of the range CaSys.OPB 19" enclosure must be dismantled in order to better promote the different materials constituent.

The potential for recycling is more than 90%. This percentage includes metallic materials conform to the ROHS directive, plastics marked. According to the treatment process, the door containing the glass must be separated from the flow to improve the recovery of product.

Product Environmental Profile – PEP

Environmental impacts

The Life Cycle Analysis (LCA) has been realized with the software EIME (Environmental Impact and Management Explorer) version 4.0 and its database version 10.0.

The hypothesis of life of the product is 20 years.

The perimeter analyzed is composed of a CaSys.OPB 19" enclosure with swing rack 6 U 380*600*400.

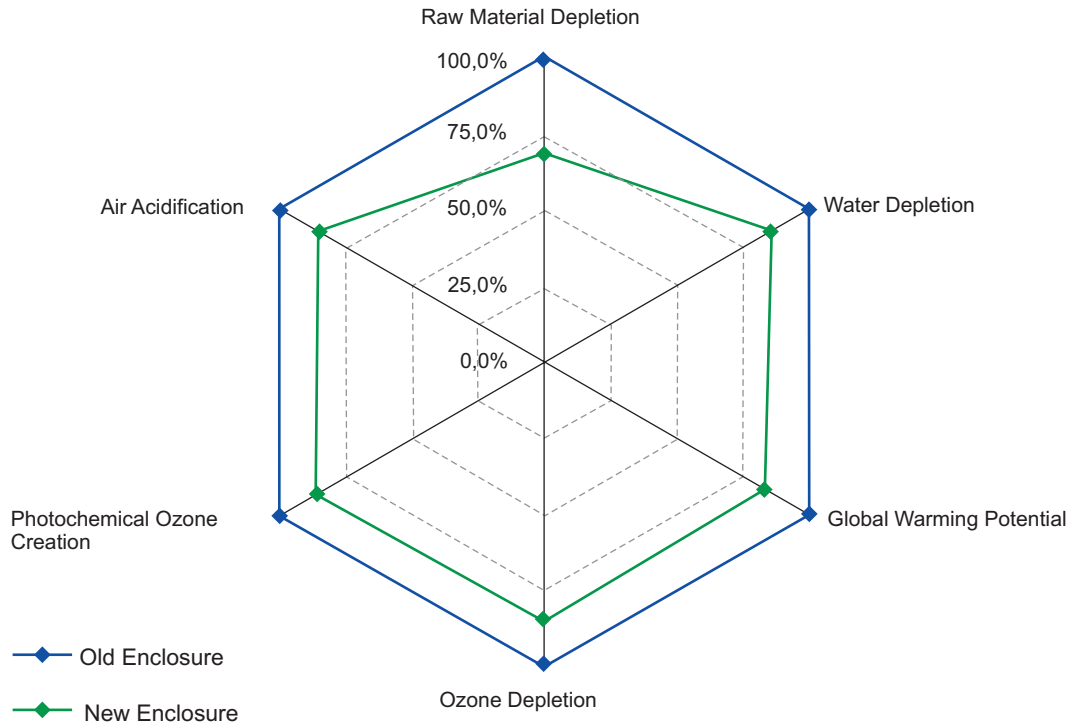
Environmental impacts have been analyzed for the phases Manufacturing (M), including the development of raw materials, Distribution (D) and Utilization (U).

Presentation of environmental impacts of the product:

Environmental indicators	Unit	CaSys.OPB 19" enclosure NSYOPB6U64			
		S=M+D+U	M	D	U
Raw Material Depletion	Y-1	1.08E-14	1.0732E-14	6.7761E-17	0.00E+00
Energy Depletion	MJ	6.3498E2	5.2586E2	1.0913E2	0.00E+00
Water Depletion	dm3	3.2562E2	2.4368E2	81.94	0.00E+00
Global Warming	g ~CO2	4.7127E4	4.5049E4	2.0777E3	0.00E+00
Ozone Depletion	g ~CFC-11	5.1482E-3	4.1135E-3	1.0347E-3	0.00E+00
Air Toxicity	m3	7.5214E6	6.7849E6	7.365E5	0.00E+00
Photochemical Ozone Creation	g ~C2H4	11.32	9.623	1.697	0.00E+00
Air Acidification	g ~H+	5.353	4.788	5.6489E-1	0.00E+00
Water Toxicity	dm3	1.4575E4	1.334E4	1.2352E3	0.00E+00
Water Eutrophication	g ~PO4	1.768	1.232	5.3639E-1	0.00E+00
Hazardous Waste Production	kg	1.0362E-1	9.9614E-2	4.0007E-3	0.00E+00

Product Environmental Profile – PEP

Comparison of the environmental impacts of the new range compared to the preceding one



The life cycle analysis has allowed to notice that the Manufacturing phase (M phase) is the most influence phase of life on the majority environmental indicators and environmental parameters of this phase have been optimized for conception.

The product benefits from a reduction of its mass of steel by 18% and therefore its painted surface which reduces its impact on environment, on average of 17% on all environmental indicators taken into account, compared to the previous range.

For other products than the reference product, environmental impacts are proportional to the weight of product.

System approach

The products designed in compliance with the ROHS directive (2002/95/EC of January 27, 2003), they can be integrated without restriction to equipment or installation that would be submitted directly to this regulation.

NB: environmental impacts of the product depend on the conditions of installation and use of the product.

The values of environmental impacts listed in the table above are valid only within the frame specified and can not be directly used to determine the environmental balance of the facility.

This document is based on the ISO14020 standard on the general principles of environmental statements and on the ISO14025 standard environmental statements type III.

Product Environmental Profile – PEP

Glossary

Raw Material Depletion (RMD)

The RMD indicator calculates the depletion of natural resources, taking into account the size of the reserve for that resource in the ground and the consumption rate of today's economy. It is expressed in the fraction of the reserve disappearing per year (because the consumption rate is expressed as a quantity per year).

Global Warming Potential (GWP)

The GWP indicator calculates the contribution to the global warming of the atmosphere by the release of specific gases. It is expressed in grams of CO₂, as if all gases were CO₂, using equivalency in their warming potential.

Ozone Depletion (OD)

The OD indicator calculates the contribution to the depletion of stratospheric ozone layer by release of specific gases. It is expressed in grams of CFC-11, as if all gases were CFC-11, using equivalency in their depletion potential.

Photochemical Ozone Creation (POC)

The POC indicator calculates the potential creation of tropospheric ozone ("smog") by the release of specific gases which will become oxidants in the low atmosphere under the action of the solar radiation. It is expressed in grams of ethylene (C₂H₄), as if all substances were C₂H₄, using their equivalent potential.

Air Acidification (AA)

The AA indicator presents the air acidification by gases released to the atmosphere. It is expressed in grams of H⁺, as if all gases were H⁺, using equivalency in their acidification potential.

Water Depletion (WD)

WD indicator calculates the consumption of water.

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