OptiLine 45/70, Poles, Posts and Service boxes

Product Environmental Profile

Schneider Electric

Product Environmental Profile - PEP

Product overview

The main function of the OptiLine Pole, Post and Service box product range is to distribute electricity and VDI (Voice, Data, Image) to the end user in commercial buildings.

The representative product used for the analysis is a two-sided Pole, tension-mounted (ref. no. ISM20106).

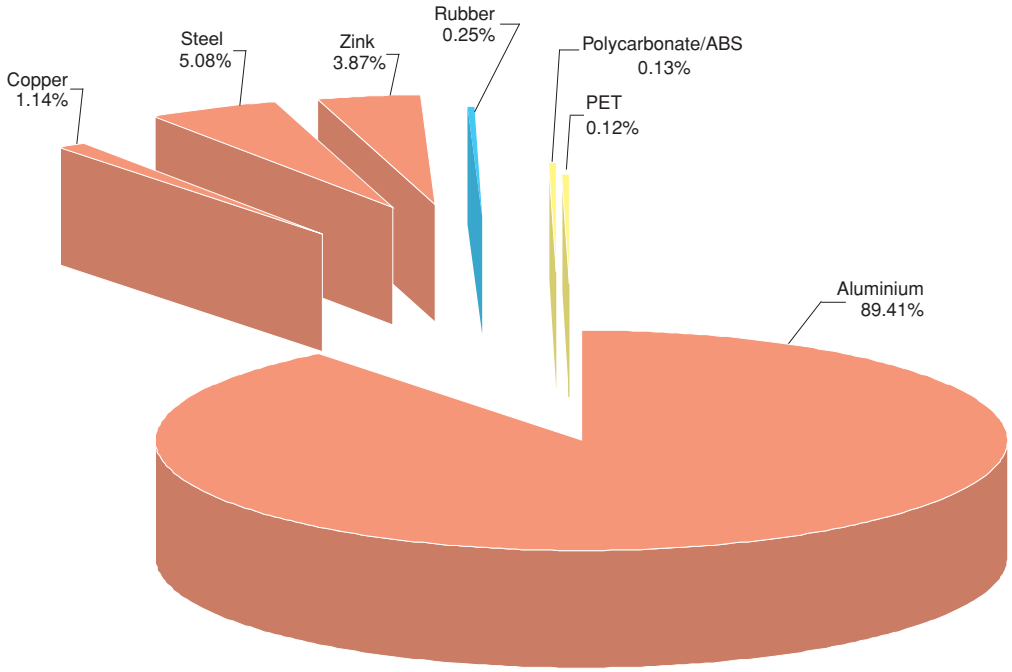
The environmental impacts of this referenced product are representative of the impacts of other products in the range which have been developed with the same technology.

The environmental analysis was performed in conformity with ISO14040 “Environmental management: Life cycle assessment – Principle and framework”.

This analysis takes the stages in the life cycle of the product into account.

Constituent materials

The weight of the products in the range lies between 580 g and 10485 g, packaging excluded. It is 10485 g for a two-sided Pole, tension-mounted (ref. no. ISM20106). The constituent materials are distributed as follows:



All necessary steps have been taken with our services, suppliers and subcontractors to ensure that the materials used in the composition of the OptiLine Pole, Post and Service box product range do not contain any substances prohibited by the legislation that was in force* when the product or range was launched on the market.

Products in this range are designed in conformity with the requirements of the RoHS directive (European Directive 2002/95/EC of 27 January 2003) and do not contain, (or contain in authorised proportions) lead, mercury, cadmium, hexavalent chromium, flame retardants (Polybromo Biphenyl PBB, Polybromo Diphenyl Ethers PBDE) as mentioned in the Directive.

* according to the list available on request.

Manufacturing

The OptiLine Pole, Post and Service box product range is manufactured at a Schneider Electric production site on which an ISO14001-certified environmental management system has been established.

Distribution

The weight and volume of the packaging have been reduced, in compliance with the European Union’s packaging directive.

A two-sided Service Pole, tension-mounted (ref. no. ISM20106) packaging weight is 1991 g. It consists of cardboard.

The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

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Utilization

The OptiLine Pole, Post and Service box product range do not generate environmental pollution requiring special precautionary measures (noise, emissions, and so on).

End of life

At end of life, the products in the OptiLine Pole, Post and Service box product range can either be dismantled or ground to facilitate the recovery of the various constituent materials.

The product is potentially recyclable.

Environmental impacts

The EIME (Environmental Impact and Management Explorer) software, version 1.6, and its database, version 5.4, were used for the life cycle assessment (LCA).

The scope of the analysis was limited to one two-sided Service Pole, tension-mounted (ref. no. ISM20106).

The system does not include cables, which are part of the electrical installation.

The environmental impacts were analysed for the Manufacturing (M) phases, including the processing of raw materials, and for the Distribution (D) and Utilisation (U) phases.

Presentation of the environmental impacts of the product

Environmental indicators	Short	Unit	Pole (1,000 unit)			
			S = M + D + U	M	D	U
Raw material depletion	RMD	Y-1	$2.76\ 10^{-14}$	$2.74\ 10^{-14}$	$1.39\ 10^{-16}$	0
Energy depletion	ED	MJ	$1.82\ 10^{3}$	$1.67\ 10^{3}$	$1.52\ 10^{2}$	0
Water depletion	WD	dm^3	$1.92\ 10^{2}$	92.5	99.9	0
Global warming	GW	g≈CO_2	$1.15\ 10^{5}$	$1.08\ 10^{5}$	$6.84\ 10^{3}$	0
Ozone depletion	OD	g≈CFC-11	$4.01\ 10^{-2}$	$3.60\ 10^{-2}$	$4.11\ 10^{-3}$	0
Photochemical ozone creation	POC	g≈C_2H_4	54.5	46.8	7.69	0
Air acidification	AA	g≈H^+	23.5	21.8	1.77	0
Hazardous waste production	HWP	kg	$2.18\ 10^{-2}$	$1.76\ 10^{-2}$	$4.23\ 10^{-3}$	0

The life cycle analysis shows that the manufacturing phase (M) is the phase with the greatest impact on the majority of environmental indicators. The environmental parameters of this phase have been optimized at the design stage.

The product benefits from optimizing material thickness to decrease material impact.

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System approach

As the product of the range are designed in accordance with the ROHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction within an assembly or an installation submitted to this Directive.

Please note that the environmental impacts of the product depend on the use and installation conditions of the product. Impacts values given above are only valid within the context specified and cannot be directly used to draw up the environmental assessment of the installation.

Glossary

Raw Material Depletion (RMD)	This indicator quantifies the consumption of raw materials during the life cycle of the product. It is expressed as the fraction of natural resources that disappear each year, with respect to all the annual reserves of this material.
Energy Depletion (ED)	This indicator gives the quantity of energy consumed, whether if be from fossil, hydroelectric, nuclear or other sources. This indicator takes into account the energy from the material produced during combustion. It is expressed in MJ.
Water Depletion (WD)	This indicator calculates the volume of water consumed, including drinking water and water from industrial sources. It is expressed in m^3.
Global Warming Potential (GWP)	The global warming of the planet is the result of the increase in the greenhouse effect due to the sunlight reflected by the earth's surface being absorbed by certain gases known as "greenhouse-effect" gases. This effect is quantified in gram equivalent CO_2.
Ozone Depletion (OD)	This indicator defines the contribution to the phenomenon of the disappearance of the stratospheric ozone layer due to the emission of certain specific gases. This effect is expressed in gram equivalent of CFC-11.
Photochemical Ozone Creation (POC)	This indicator quantifies the contribution to the smog phenomenon (the photochemical oxidation of certain gases which generates ozone) and is expressed in gram equivalent of ethylene (C_2H_4).
Air Acidification (AA)	The acid substances present in the atmosphere are carried by the rain. A high level of acidity in rain can cause damage to forests. The contribution of acidification is calculated using the acidification potentials of the substances concerned and is expressed in mole equivalent of H^+.
Hazardous Waste Production (HWP)	This indicator gives the quantity of waste, produced along the life cycle of the product (manufacturing, distribution, use, including production of energy), that requires special treatments. It is expressed in kg.

We are committed to safeguarding our planet by "Combining innovation and continuous improvement to meet the new environmental challenges".

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This document is based on ISO14020 which relates to the general principles of environmental declarations and the ISO14025 relating to type III environmental declarations.

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