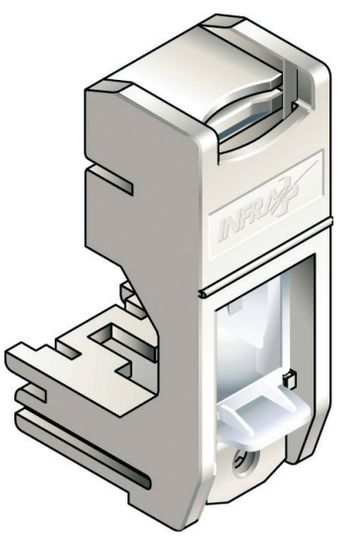
Product Environmental Profile

Multiplus connector support



PEP ecoPASSPORT®

Schneider Electric

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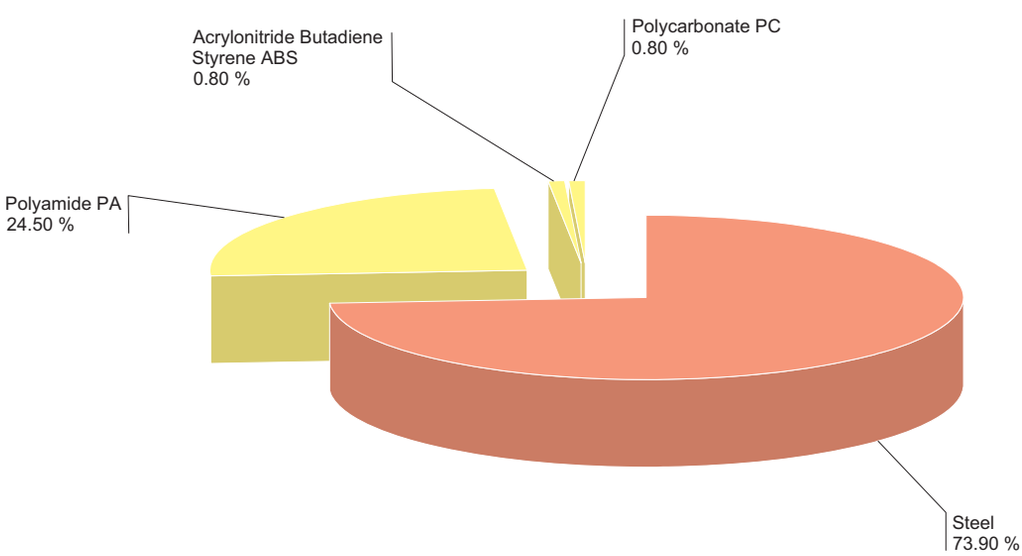
Product Overview

The main function of the Multiplus connector support is to maintain the RJ45 connector into the Multiplus Data panel and to provide dust shutter protection and label holder.
This range consists of: the Multiplus connector support including the RJ Lock and RJ Plug versions.
The representative product used for the analysis is VDI9901 Multiplus connector support.
The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with the same technology.
The environmental analysis was performed in conformity with ISO 14040 "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 mass of the range products spreads out between 16 g and 20 g packing excluded. It is 18.6 g for the VDI9901 Multiplus connector support.
The constituent materials are distributed as follows:



Substance assessment

Products of 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 in the authorised proportions, lead, mercury, cadmium, chromium hexavalent, flame retardant (polybromobiphenyles PBB, polybromodiphenylthers PBDE) as mentioned in the Directive.

Manufacturing

Multiplus connector support range is manufactured at a production site which complies with the regulations governing industrial sites.

Distribution

The weight and volume of the packaging have been reduced, in compliance with the European Union's packaging directive.
The VDI9901 Multiplus connector support packaging weight is 2.123 g.
It consists of Paper 0.016 g; Cardboard 2.1 g.
The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

Product Environmental Profile - PEP

Utilization

The products of the Multiplus connector support range do not generate environmental pollution requiring special precautionary measures (noise, emissions, and so on).
The dissipated power depends on the conditions under which the product is implemented and used.
This dissipated power is 0 W for the Multiplus connector support product range.
For an utilisation rate of 100%, it is 0 W for the referenced VDI9901 Multiplus connector support.

End of life

At end of life, the products in the Multiplus connector support range can either be dismantled or grinded to facilitate the recovery of the various constituent materials.
The proportion of recyclable material is higher than 95 %.
This percentage includes the following materials: Steel, PA Polyamide, ABS Acrylonitrile Butadiene Styrene, PC Polycarbonate .
The end of life details appear on the product end-of-life recovery sheet.

Environmental impacts

The EIME (Environmental Impact and Management Explorer) software, version 4.0, and its database, version V10 were used for the life cycle assessment (LCA).
The assumed service life of the product is 20 years with a utilisation rate of the installation of 100 % and the electrical power model used is OFF (ON, OFF, Stand by).
The scope of the analysis was limited to a VDI9901 Multiplus connector support.
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:

Environmental indicators	Short	Unit	Infraplus 45 x 45 face plate (1,000 units)			
			S = M + D + U	M	D	U
Raw material depletion	**RMD**	**Y-1**	**$2.46E^{-18}$**	$2.29E^{-18}$	$1.74E^{-19}$	0
Energy depletion	**ED**	**MJ**	**1.292**	1.165	0.12709	0
Water Depletion	**WD**	**dm^3**	**0.59898**	0.58188	0.017101	0
Global warming	**GW**	**g≈CO_2**	**93.903**	85.856	8.048	0
Ozone depletion	**OD**	**g≈CFC-11**	**$8.73E^{-06}$**	$2.98E^{-06}$	$5.75E^{-06}$	0
Photochemical ozone creation	**POC**	**g≈C_2H_4**	**0.026399**	0.019356	0.007043	0
Air Acidification	**AA**	**g≈H^+**	**0.010789**	0.009429	0.001361	0
Hazardous waste production	**HWP**	**kg**	**0.00048**	0.000476	$3.58E^{-06}$	0

The life cycle analysis shows that the Manufacturing phase is the life cycle phase which has the greatest impact on the majority of environmental indicators. The environmental parameters of this phase have been optimized at the design stage.
The environmental impacts variability between the upper part and the lower part of the range is less than 5 %.

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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.

N.B.: 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 the material.

Energy Depletion (ED)

This indicator gives the quantity of energy consumed, whether it 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 dm^3.

Global Warming (GW)

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. The effect is quantified in gram equivalent of 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. The 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 rain. A high level of acidity in the rain can cause damage to forests. The contribution of acidification is calculated using the acidification potentials of the substances concerned and is expressed in mode equivalent of H^+.

Hazardous Waste Production (HWP)

This indicator calculates the quantity of specially treated waste created during all the life cycle phases (manufacturing, distribution and utilization). For example, special industrial waste in the manufacturing phase, waste associated with the production of electrical power, etc.
It is expressed in kg.

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

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