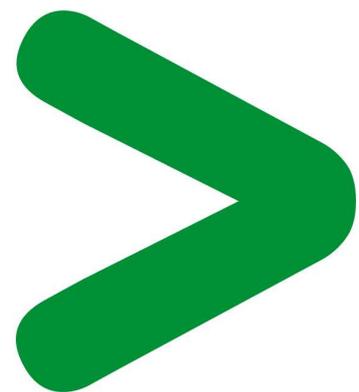


# Product Environmental Profile

**PRISMA P  
CUBICLES  
Up to 4000A**



# Product Environmental Profile - PEP

## Product overview

The analysed product is part of the Prisma P system range.

The main functions are listed below:

- installing electrical devices (mounting plates and front plates)
- distribution of current (distribution blocks, busbars...)
- connection of switchboards on site (connections, terminal blocks, cable tie supports...)

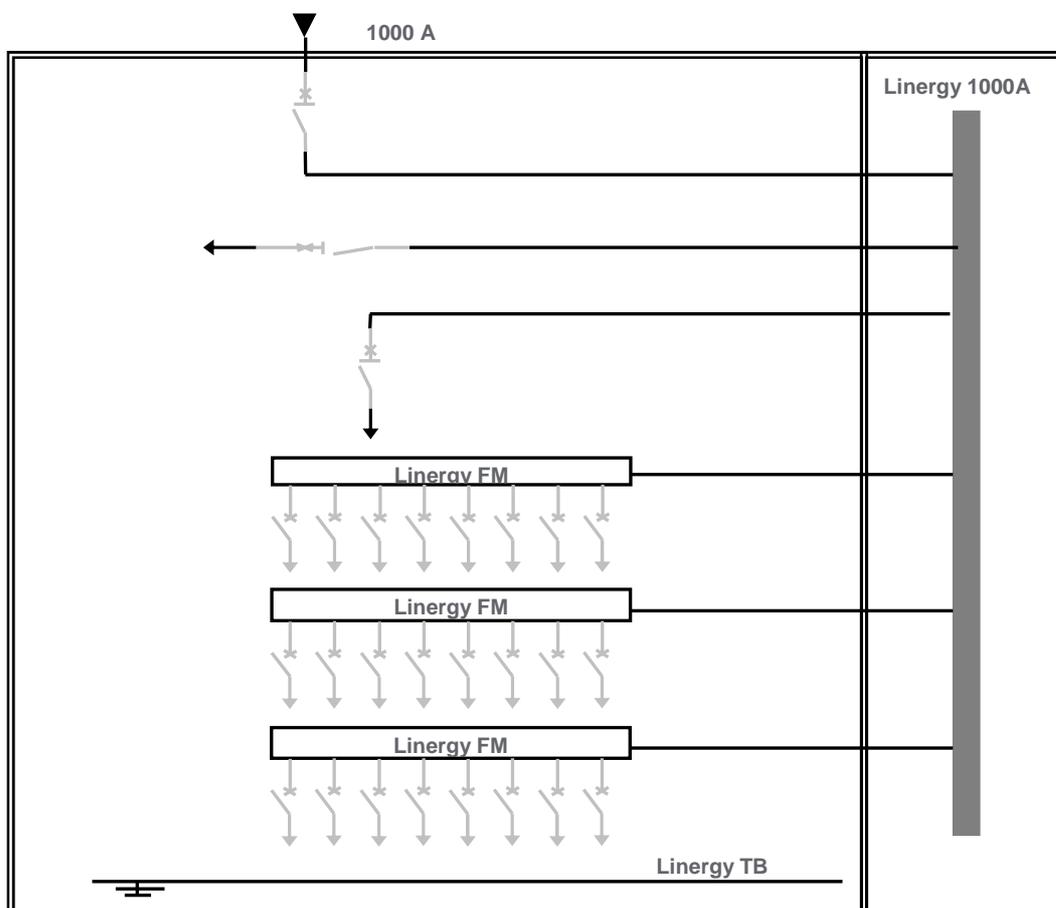
This range consists of enclosures up to 4000A.

Use of the components in the Prisma P functional system ensures the creation of switchboards complying with standards IEC 61439-1 and 2, as well as local versions with the following electrical characteristics:

- rated insulation level of main busbars: 1000 V
- InA (A): 3520 A
- rated peak withstand current I<sub>pk</sub>: 220 kA
- rated short-time withstand current I<sub>cw</sub>: 100 kA rms / 1 second
- frequency: 50/60 Hz.

The product used for the analysis is a Prisma P 1000A Cubicle with components for the following functional units:

- incoming for: - 1000A fixed circuit breaker (typically Compact NS)
- outgoing for: - 250A horizontal circuit breakers (typically Compact NSX)  
- 250A vertical circuit breakers (typically Compact NSX)  
- modular circuit breakers (typically 3 rows of Acti 9 devices)



**NB** : Circuit breakers are not included in the analysis.

## Product Environmental Profile - PEP

The commercial references used for this configuration are the following:

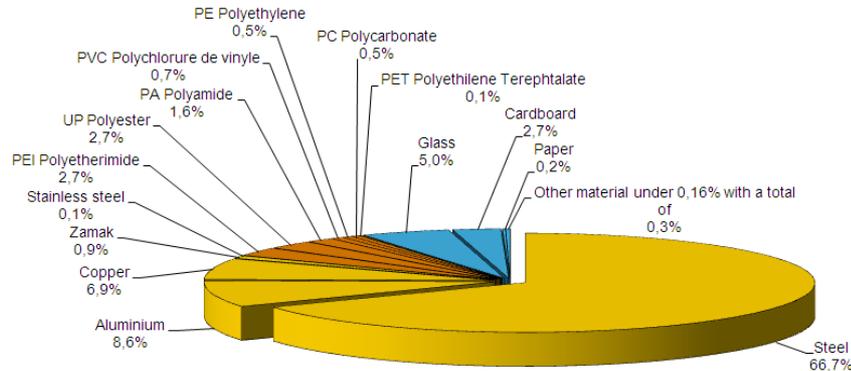
03482, 03690, 03802, 03803, 04486, 04926, 03412, 03612, 04424, 04426, 03420, 03243, 03802, 04404, 03401, 03204, 04014, 04239, 03203, 04004, 4504, 04651, 04922, 08403, 08407, 08506, 08513, 08538, 08433, 08438, 08733, 08738, 08750, 08773, 08794, 04657, 04502, 08493, 08497.

The environmental analysis was performed in conformity with ISO 14040.

## Constituent materials

The mass is 190,3Kg including packaging for the Prisma P 1000A cubicle with components.

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 only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive

Details of ROHS and REACH substances information are available on the Schneider-Electric [Green Premium website](http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page).

(<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>)

## Manufacturing

The Prisma G product range is manufactured at a Schneider Electric production site (Montmélan France) on which an ISO14001 certified environmental management system has been established.

## Distribution

The weight and volume of the packaging have been optimized, based on the European Union's packaging directive.

The Prisma P 1000A cubicle packaging weight is 6755g. It consists of cardboard (5116g) paper (312g), PELD (958g), PET (261g) and PSE (107g).

## Use

The products of the Prisma P range do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.

The dissipated power depends on the conditions under which the product is implemented and used. This dissipated power is 197 Watts for the Prisma P 1000A cubicle.

This thermal dissipation represents less than 0.01% of the power which passes through the product.

The product range does not require special maintenance operations.

## End of life

At end of life, the products in the Prisma P range have been optimized to decrease the amount of waste and allow recovery of the product components and materials.

The switchboards configuration can be different depending on the customer's needs. Some sub-assemblies inside should be separated from the stream of waste so as to optimize end-of-life treatment by special treatments. The location of these components and other recommendations are given in the End of Life Instruction document which is available for this product range on the Schneider-Electric [Green Premium website](http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page)

(<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>).

The recyclability potential of the products has been evaluated using the "ECO DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

According to this method, the potential recyclability ratio is: 78%.

As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

# Product Environmental Profile - PEP

## Environmental impacts

Life cycle assessment has been performed on the following life cycle phases: Materials and Manufacturing (M), Distribution (D), Installation (I) Use (U), and End of life (E).

Modelling hypothesis and method:

- the calculation was performed on the Prisma P 1000A cubicle with components
  - product packaging: is included
  - installation components: no special components included.
  - scenario for the Use phase: this product range is included in the category energy passing product: (assumed service life is 20 years and use scenario is: product dissipation is 197 Watts, loading rate is 30% and service uptime percentage is 100%.
  - the geographical representative area for the assessment is Europe and the electrical power model used for calculation is European model.
- End of life impacts are based on a worst case transport distance to the recycling plant (1000km).

### Presentation of the product environmental impacts

Environmental indicators	Unit	For Prisma P 1000A cubicle					
		S = M + D + I + U + E	M	D	I	U	E
Raw Material Depletion	Y-1	5,68E-13	5,27E-13	3,11E-16	0,00E+00	4,04E-14	3,89E-16
Energy Depletion	MJ	4,97E+04	1,36E+04	2,28E+02	0,00E+00	3,56E+04	2,85E+02
Water depletion	dm <sup>3</sup>	1,16E+04	6,42E+03	2,17E+01	0,00E+00	5,14E+03	2,71E+01
Global Warming	g≈CO <sub>2</sub>	2,75E+06	9,15E+05	1,81E+04	0,00E+00	1,79E+06	2,26E+04
Ozone Depletion	g≈CFC-11	5,57E-01	4,30E-01	1,28E-02	0,00E+00	9,75E-02	1,60E-02
Air Toxicity	m <sup>3</sup>	6,07E+08	3,01E+08	3,41E+06	0,00E+00	2,98E+08	4,26E+06
Photochemical Ozone Creation	g≈C <sub>2</sub> H <sub>4</sub>	9,33E+02	2,91E+02	1,55E+01	0,00E+00	6,07E+02	1,93E+01
Air acidification	g≈H <sup>+</sup>	4,16E+02	1,68E+02	2,31E+00	0,00E+00	2,42E+02	2,88E+00
Water Toxicity	dm <sup>3</sup>	6,63E+05	1,46E+05	2,26E+03	0,00E+00	5,12E+05	2,82E+03
Water Eutrophication	g≈PO <sub>4</sub>	3,00E+01	2,51E+01	3,01E-01	0,00E+00	4,22E+00	3,76E-01
Hazardous waste production	kg	1,04E+02	7,46E+01	6,72E-03	0,00E+00	2,98E+01	8,40E-03

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 4.0, and with its database version 11.0.

The manufacturing phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.

## System approach

As the products 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 in an assembly or an installation subject to this Directive.

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

## Glossary

<b>Raw Material Depletion (RMD)</b>	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.
<b>Energy Depletion (ED)</b>	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.
<b>Water Depletion (WD)</b>	This indicator calculates the volume of water consumed, including drinking water and water from industrial sources. It is expressed in dm <sup>3</sup> .
<b>Global Warming (GW)</b>	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 <sub>2</sub> .
<b>Ozone Depletion (OD)</b>	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.
<b>Air Toxicity (AT)</b>	This indicator represents the air toxicity in a human environment. It takes into account the usually accepted concentrations for several gases in the air and the quantity of gas released over the life cycle. The indication given corresponds to the air volume needed to dilute these gases down to acceptable concentrations.
<b>Photochemical Ozone Creation (POC)</b>	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 <sub>2</sub> H <sub>4</sub> ).
<b>Air Acidification (AA)</b>	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 <sup>+</sup> .
<b>Water Toxicity (WT)</b>	This indicator represents the water toxicity. It takes into account the usually accepted concentrations for several substances in water and the quantity of substances released over the life cycle. The indication given corresponds to the water volume needed to dilute these substances down to acceptable concentrations.
<b>Hazardous Waste Production (HWP)</b>	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.

Registration N°: SCHN-2013-001		Applicable PCR : PEP- PCR-ed 2-EN-2011 12 09	
Verifier accreditation N°: VH05		Program informatio n: <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>	
Date of issue: 04-2013		Period of validity: 4 years	
Independent verification of the declaration and data, according to ISO 14025:2006			
Internal	X	External	
In compliance with ISO 14025:2006 type III environmental declarations			
PCR review was conducted by an expert panel chaired by J. Chevalier (CSTB).			
The elements of the actual PEP cannot be compared with elements from another program.			

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