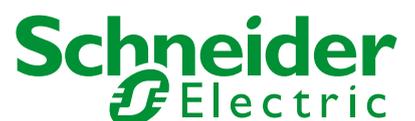
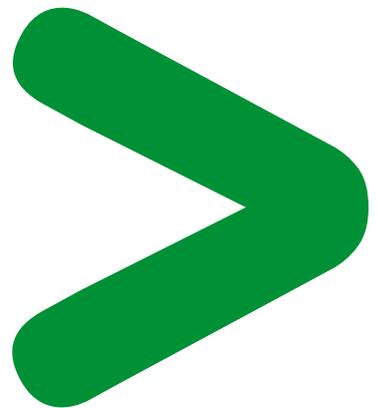


Product Environmental Profile

PRIMALUM

Emergency Lighting

Self - Contained luminaire



Product Environmental Profile - PEP

Product Overview

Primalum is an emergency lighting product range for Spain.

The main function of the product is to help people to localize exits in case of black out/ emergency situations and to avoid panic.

The representative product used for the analysis is PRIMALUM Ref: OVA 37037E.

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.

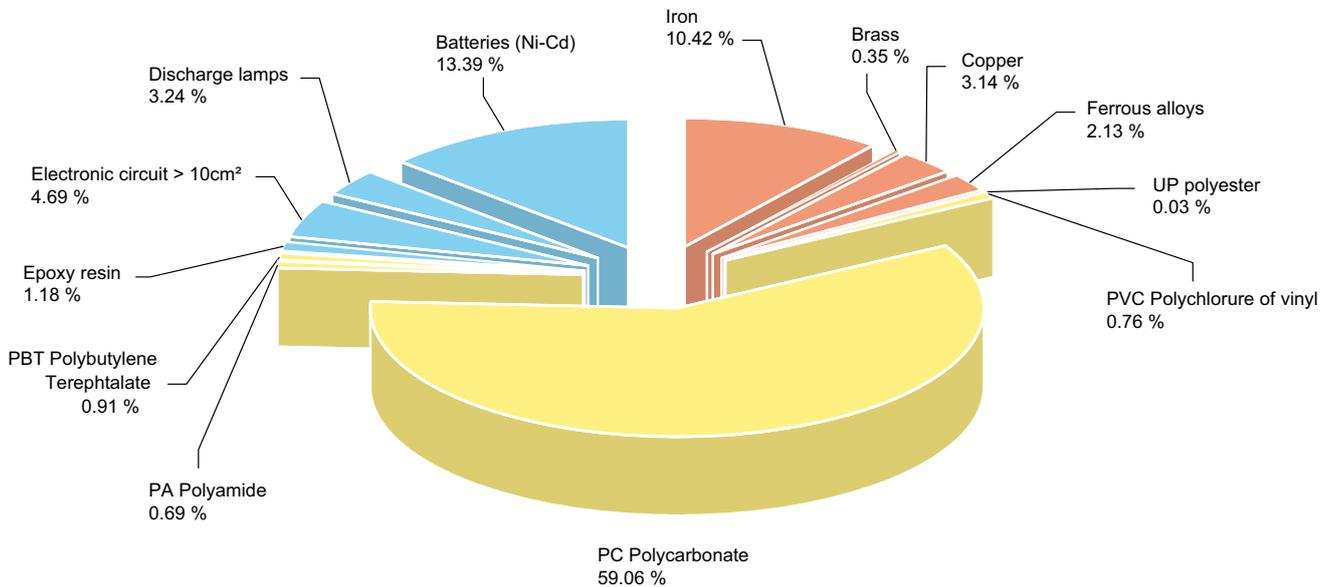
The environmental analysis was performed in conformity with ISO 14040 "Environmental management: Life cycle assessment – Principle and framework".

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 680 g and 870 g packing excluded. It is 680 g for the PRIMALUM IP42 Ref: OVA 37037E.

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, polybromodiphenylthethers PBDE) as mentioned in the Directive.

Manufacturing

The EMERGENCY LIGHTING PRIMALUM product range is manufactured at a Schneider Electric production site on which an ISO 14001 certified environmental management system has been established.

Distribution

The EMERGENCY LIGHTING PRIMALUM packaging weight is 74,38 g. It consists of Paper (8,88 g), Cardboard (65,5 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 EMERGENCY LIGHTING PRIMALUM 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 spreads out between 1.84 W and 2.7 W for the EMERGENCY LIGHTING PRIMALUM product range.

For an utilisation rate of 99.9 %, it is 1.84 W for the referenced PRIMALUM Ref: OVA 37037E.

End of life

At end of life, the products of the EMERGENCY LIGHTING PRIMALUM must be dismantled to facilitate the recovery of the various constituent materials.

The proportion of recyclable material is higher than 74 %.

This percentage includes the following materials: Iron, Brass, Copper, UP polyester, PVC Polyvinyl Chloride, PC Polycarbonate, PA Polyamide.

The products of this range also include Batteries and Fluorescent bulb which have to be disassembled and which must be sent to specialised treatment systems.

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 10 years with a utilisation rate of the installation of 100% and the electrical power model used is ON (ON, OFF, Stand by).

The scope of the analysis was limited to a PRIMALUM IP42 6/1NC GSE Ref: OVA 37037E.

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

Presentation of the environmental impacts

Environmental indicators	Short	Unit	Primalum Ref: OVA 37037E			
			S = M + D + U	M	D	U
Raw material depletion	RMD	Y-1	1.2872E ⁻¹³	1.2688E ⁻¹³	7.2741E ⁻¹⁸	1.8352E ⁻¹⁵
Energy depletion	ED	MJ	1.7967E ⁺⁰³	1.5154E ⁺⁰²	5.222	1.6399E ⁺⁰³
Water depletion	WD	dm ³	3.0352E ⁺⁰²	47.603	2.332	2.5359E ⁺⁰²
Global warming	GW	g ~CO ₂	9.3194E ⁺⁰⁴	9.1764E ⁺⁰³	2.2165E ⁺⁰²	8.3796E ⁺⁰⁴
Ozone depletion	OD	g ~CFC-11	8.2837E ⁻⁰³	1.01E ⁻⁰³	6.3424E ⁻⁰⁵	7.2102E ⁻⁰³
Photochemical ozone creation	POC	g ~C ₂ H ₄	32.688	3.437	1.7111E ⁻⁰¹	29.08
Air acidification	AA	g ~H ⁺	14.96	1.666	3.2173E ⁻⁰²	13.262
Hazardous waste production	HWP	kg	1.438	1.0199E ⁻⁰¹	9.973E ⁻⁰⁵	1.335

The life cycle analysis shows that the Use phase (M, D or U 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. For example, the design of the transformer and of the circuit of charge have been optimized to reduce power losses

The environmental impacts variability between the upper part and the lower part of the range is less than 50 %.

Product Environmental Profile - PEP

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 dm³.

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. The effect is quantified in gram equivalent of CO₂.

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 methane (C₂H₄).

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.

Registration No.: SCHN-2011-142-V0

Programme information: www.pep-ecopassport.org

PEP in compliance with PEPECopassport according to PEP-AP0011 rules

ACV rules are available from PEP editor on request

Schneider Electric Industries SAS

35, rue Joseph Monier
CS30323
F - 92506 Rueil Malmaison Cedex

RCS Nanterre 954 503 439
Capital social 896 313 776 €
www.schneider-electric.com



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

Published by: Schneider Electric