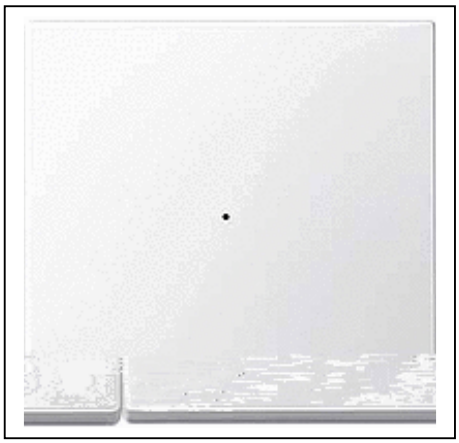
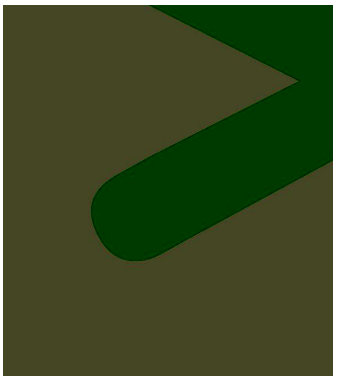
Product Environmental Profile

Rockers for Push-Button Modules





Product Environmental Profile - PEP

Product overview

The Rockers are used to cover pushbutton modules and etc.

This range consists of: Rockers for Push-Button Modules.

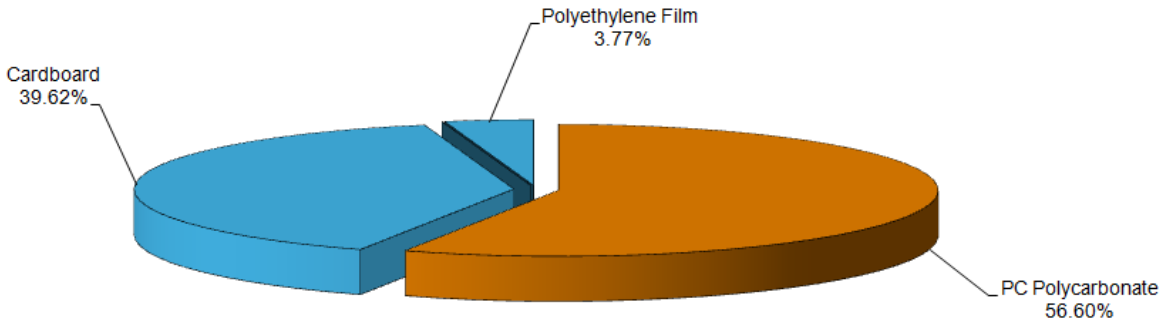
The representative product used for the analysis is Rocker for 1-gang push-button module, polar white glossy, Ref: MTN619119.

The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.

The environmental analysis was performed in conformity with ISO 14040.

Constituent materials

The mass of the product range is from10 g and 20 g including packaging. It is 15.8 g for the Rocker for 1-gang push-button module, polar white glossy, Ref: MTN619119.
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.

Manufacturing

The Rockers for Push-Button Modules 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 optimized, based on the European Union's packaging directive.
The Rockers for Push-Button Modules packaging weight is 6.9 g. It consists of It consists of Cardboard (6.3 g) and PE foil (0.1 g) and LDPE bag (0.5 g).

Product Environmental Profile - PEP

Use

The products of the Rockers for Push-Button Modules range do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.
The product range does not require special maintenance operations.

End of life

At end of life, the products in the Rockers for Push-Button Modules have been optimized to decrease the amount of waste and allow recovery of the product components and materials.
This product range doesn't need any special end-of-life treatment. According to countries' practices this product can enter the usual end-of-life treatment process.
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: **94%**.
As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

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 Rocker for 1-gang push-button module, polar white glossy, Ref: MTN619119.
- Product packaging: Is included.
- Installation components: No special components included.
- Scenario for the Use phase: This product range is included in the category **"Enclosure ":** (assumed service life is20 years).
- The geographical representative area for the assessment is European 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	Rocker for 1-gang push-button module, polar white glossy, Ref: MTN619119					
		S = M + D + I + U + E	M	D	I	U	E
Air Acidification (AA for PEP)	kg H+ eq	2.73E-05	2.47E-05	3.54E-07	0.00E+00	0.00E+00	2.28E-06
Air toxicity (AT for PEP)	m^3	3.76E+04	3.37E+04	5.26E+02	0.00E+00	0.00E+00	3.39E+03
Energy Depletion (ED for PEP)	MJ	2.97E+00	2.78E+00	2.69E-02	0.00E+00	0.00E+00	1.64E-01
Global Warming Potential (GWP for PEP)	kg CO_2 eq.	1.96E-01	1.82E-01	1.90E-03	0.00E+00	0.00E+00	1.16E-02
Hazardous Waste Production (HWP for PEP)	kg	1.29E-03	1.29E-03	2.36E-09	0.00E+00	0.00E+00	1.44E-08
Ozone Depletion Potential (ODP for PEP)	kg CFC-11 eq.	4.59E-09	4.56E-09	3.61E-12	0.00E+00	0.00E+00	2.20E-11
Photochemical Ozone Creation Potential (POCP for PEP)	kg C_2H_4 eq.	4.83E-05	4.50E-05	4.25E-07	0.00E+00	0.00E+00	2.89E-06
Raw Material Depletion (RMD for PEP)	Y-1	4.87E-18	4.59E-18	3.89E-20	0.00E+00	0.00E+00	2.37E-19
Water Depletion (WD for PEP)	dm3	3.62E-01	3.61E-01	1.98E-04	0.00E+00	0.00E+00	1.20E-03
Water Eutrophication (WE for PEP)	kg PO_4^3 eq.	1.72E-05	1.72E-05	3.54E-09	0.00E+00	0.00E+00	2.16E-08
Water Toxicity (WT for PEP)	m^3	8.79E-02	8.22E-02	8.15E-04	0.00E+00	0.00E+00	4.96E-03

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 5.1, and with its database version 2013-02.
The **M** 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

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.

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