# Product Environmental Profile

LexCom RJ45 shutters







# Product Environmental Profile - PEP

#### Product Overview .

The main function of the LexCom RJ45 Shutters (pack of 24 pcs) product range is to cover the front of the RJ45 connector to protect the contacts from damage & dust ingression. This range consists of:

- 1 x LexCom RJ45 Shutters (pack of 24 pcs) Blue (VDI M 11U 241)
- 1 x LexCom RJ45 Shutters (pack of 24 pcs) Yellow (VDI M 11U 242)
- 1 x LexCom RJ45 Shutters (pack of 24 pcs) Green (VDI M 11U 243)
- 1 x LexCom RJ45 Shutters (pack of 24 pcs) Red (VDI M 11U 244)
- 1 x LexCom RJ45 Shutters (pack of 24 pcs) Grey (VDI M 11U 246).

The representative product used for the analysis is LexCom RJ45 Shutters (pack of 24 pcs) Grey Ref: VDI M 11U 246.

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.

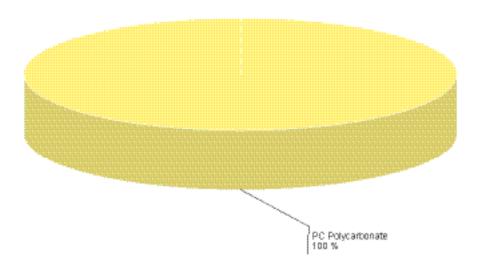
The environmental analysis was performed in conformity with ISO 14040 "Environmental management: Life cycle assessment – Principle and framework".

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

#### Constituent materials

The mass of the product range is from 72 g to 78 g packaging not included. It is 78 g for the EN40P.

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 .

LexCom RJ45 Shutters (pack of 24 pcs) 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 LexCom RJ45 Shutters (pack of 24 pcs) packaging weight is 1.9 g. It consists of PE (Low Density, LDPE, Film) 1.5 g, Paper (Recycled, With Deinking) 0.4 g.

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

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#### Utilization \_

The products of the LexCom RJ45 Shutters (pack of 24 pcs) range do not generate environmental pollution requiring special precautionary measures (noise, emissions, and so on).

The electrical power consumed by the LexCom RJ45 Shutters is zero watts.

## End of life \_\_\_\_\_

At end of life, the products in the LexCom RJ45 Shutters (pack of 24pcs) have been optimized to decrease the amount of waste and valorise the components and materials of the product in the usual end of life treatment process.

The potential of recyclability of the products has been evaluated using the Codde" recyclability and recoverability calculation method" (version V1, 20 Sep. 2008) and published by ADEME (French Agency for Environment and Energy Management).

By this method, this product range doesn't contain recyclable materials as the lack of processes for recycling these plastics types.

## **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 LexCom RJ45 Shutter in Grey Ref: VDIM11U246.

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	LexCom RJ45 shutters (1 unit)			
			S = M + D + U	М	D	U
Raw material depletion	RMD	Y-1	3.0246E <sup>-18</sup>	2.7232E <sup>-18</sup>	3.0148E <sup>-19</sup>	0.00E <sup>+00</sup>
Energy depletion	ED	MJ	2.127	1.931	1.962E <sup>-1</sup>	0.00E <sup>+00</sup>
Water depletion	WD	dm³	3.9065E-1	3.597E <sup>-1</sup>	3.0951E <sup>-</sup> 2	0.00E <sup>+00</sup>
Global warming	GW	g ~CO <sub>2</sub>	1.3057E <sup>2</sup>	1.2245E <sup>2</sup>	8.12	0.00E <sup>+00</sup>
Ozone depletion	OD	g ~CFC-11	1.1374E⁻⁵	8.3517E-6	3.0219E-6	0.00E <sup>+00</sup>
Photochemical ozone creation	POC	g ~C <sub>2</sub> H <sub>4</sub>	4.8916E-2	4.2143E <sup>-2</sup>	6.7732E <sup>-3</sup>	0.00E <sup>+00</sup>
Air acidification	AA	g ~H⁺	1.8202E-2	1.7052E <sup>-2</sup>	1.1499E <sup>-3</sup>	0.00E <sup>+00</sup>
Hazardous waste production	HWP	kg	1.2672E <sup>-3</sup>	1.2311E <sup>-3</sup>	3.6044E <sup>-5</sup>	0.00E <sup>+00</sup>

The life cycle analysis shows that the manufacturing phase (M phase) is the life cycle phase which has the greatest impact on the majority of environmental indicators.

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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<sup>3</sup>.

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<sub>2</sub>.

**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  $(C_0H_A)$ .

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  $\mathsf{H}^+$ .

**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-2011-179-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



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Published by: Schneider Electric