

Product Environmental Profile

Pass & Seymour: Radiant Decorator Switches



COMPANY OVERVIEW

• Sustainability built in to support our associates, customers, and the environment

At Legrand North America, we're committed to leading by example within our own operations, to developing high quality solutions for our customers' High Performance Buildings, and to transforming how people live and work – more safely, more comfortably, more efficiently.

• Better Performance

A core principle of designing for sustainability drives us to innovate products and systems that enable buildings to reach exceptional levels of performance, bringing about industry-leading ideas, inventions and initiatives.

• Better Operations

A commitment to a leadership role in operational excellence through environmental management, optimizing the way we manage energy, water and waste.

• Better Lives

A dedication to enhancing employee and community welfare through programs that help people enjoy healthier, more productive and more rewarding lives.

For more information on Legrand's PEPs and other sustainability initiatives, visit legrand.us/sustainability.



LEGRAND'S ENVIRONMENTAL COMMITMENTS

• Incorporate environmental management into our industrial sites

Of all Legrand sites worldwide, over 85% are ISO 14001 certified (sites belonging to Legrand for more than five years).

• Offer our customers environmentally friendly solutions

Develop innovative solutions to help our customers design more energy efficient, better managed and more environmentally friendly installations.


• Involve the environment in product design

Reduce the environmental impact of products over their whole life cycle.

Provide our customers with all relevant information (composition, consumption, end of life, etc.).



REFERENCE PRODUCT

Function	Establish, support and interrupt for 20 years rated currents in normal conditions of circuit characterized by the current up to 15A for the operating voltage 277V per US standard UL20 and up to 15A for the operating voltage 347V per Canadian Standard C22.2 111.
Reference Product	<div style="text-align: center;">  <p>Part Number: TM874W Radiant Decorator Switch 4W 15A 120/277V</p> </div>

The company reserves the right to change specifications and designs without notice. All illustrations, descriptions, dimensions and weights in the document are for guidance and cannot be held binding on the company.

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PRODUCTS CONCERNED

The environmental data is representative of the following products :

Series: TM874, TM873, TM870 including all below variations of additional suffixes.

Suffixes include:

- Color: (I) Ivory, (W) White, (GRY) Gray, (BK) Black, (DB) Dark Bronze, (LA) Light Almond, (NI) Nickel
- (NA) NAFTA Compliant
- (CC) Cut Case Retail Packaging
- (S) Self Grounding



CONSTITUENT MATERIALS

This Reference Product contains no substances prohibited by the regulations applicable at the time of its introduction to the market. It respects the restrictions on use of hazardous substances as defined in the RoHS directive 2011/65/EC.

Total weight of Reference Product (with unit packaging)		139.4 g (4.9 oz)			
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	29.6%	Steel	27.6%		
Other Plastic	0.2%	Copper Alloys	13.8%		
		Silver Alloys	0.3%		
		Other Metal	<0.1%		
				Packaging as % of weight	
				Paper	19.2%
				Wood	9.1%
				PE	<0.1%
Total plastics	29.8%	Total metals	41.7%	Total other and packaging	28.4%

Estimated recycled material content: 28% of weight.



MANUFACTURING

The Reference Product comes from sites that have received ISO 14001 certification.



DISTRIBUTION

Products are distributed from logistics centers located to optimize transport efficiency using EPA SmartWay® certified carriers to reduce greenhouse gases emissions. Information on the distance of distribution is not available so the average distance of 1200 km by heavy truck was used. This represents the average transportation distance of the Reference Product from our warehouse to the local point of distribution in the North American market.

Product Environmental Profile

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INSTALLATION

For installation of the Reference Product, only standard tools are needed and no electricity is required.



USE

Servicing and maintenance:

Under normal conditions of use, this type of product requires no servicing or maintenance.

Consumable:

No consumables are necessary to use this type of product.



END OF LIFE

• **Hazardous waste* contained in the product:** No hazardous waste comes from this Reference Product
 (*) Hazardous waste as defined by European Commission decision 2000/532/EC.

• **Recycling rate:**

Calculated using the method described in the IEC/TR 62635 technical report, the recyclability rate of the Reference Product is estimated as 98%. This value is based on data collected from a technological channel using industrial procedures. It does not pre-validate the effective use of this channel for end-of-life electrical and electronic products.

Separated into:	(% mass of Reference Product)
- plastic materials (excluding packaging):	28%
- metal materials (excluding packaging):	42%
- other materials (excluding packaging):	0%
- packaging materials:	28%



ENVIRONMENTAL IMPACTS

The evaluation of environmental impacts examines the stages of the Reference Product life cycle: manufacturing, distribution, installation, use, and end of life. It is representative of products marketed and used in North America.

The following modelling elements were taken into account:

Manufacturing	Packaging taken into account. As required by the PEP ecopassport program, all transport for the manufacturing of the Reference Product, including materials and components, has been taken into account. The waste generated during manufacturing phase has been taken into account.
Distribution	Transport between the last distribution center and an average delivery to the sales area. The default scenario modelled maximizes the environmental impact.
Installation	The end of life of the packaging (lb or g) is taken into account at this phase. Transport of packaging to end of life treatment.
Use	<ul style="list-style-type: none"> • Under normal conditions of use, this type of product requires no servicing or maintenance. • No consumables are necessary to use this type of product. • Product category: "PSR 0005 current version : § 3.8.1.1 : switches" • Use scenario: For a 20 year working life, the product operates 30% of the reference lifetime at 50% of the rated load. This modelling duration does not constitute a minimum durability requirement • Energy model: Electricity (United States) - 2009
End of life	The default end of life scenario modelled maximizes the environmental impact. In accordance with the requirements of the PCR of the "PEP ecopassport" program, transport of the reference product by truck over a distance of 1000 km to a processing site at end of life was accounted for.
Software used	EIME V5 and its database "CODDE-2015-04" and the indicators defined in the PCR ed 3 in alignment with the EN15804 standard.

Product Environmental Profile

Pass & Seymour: Radiant Decorator Switches

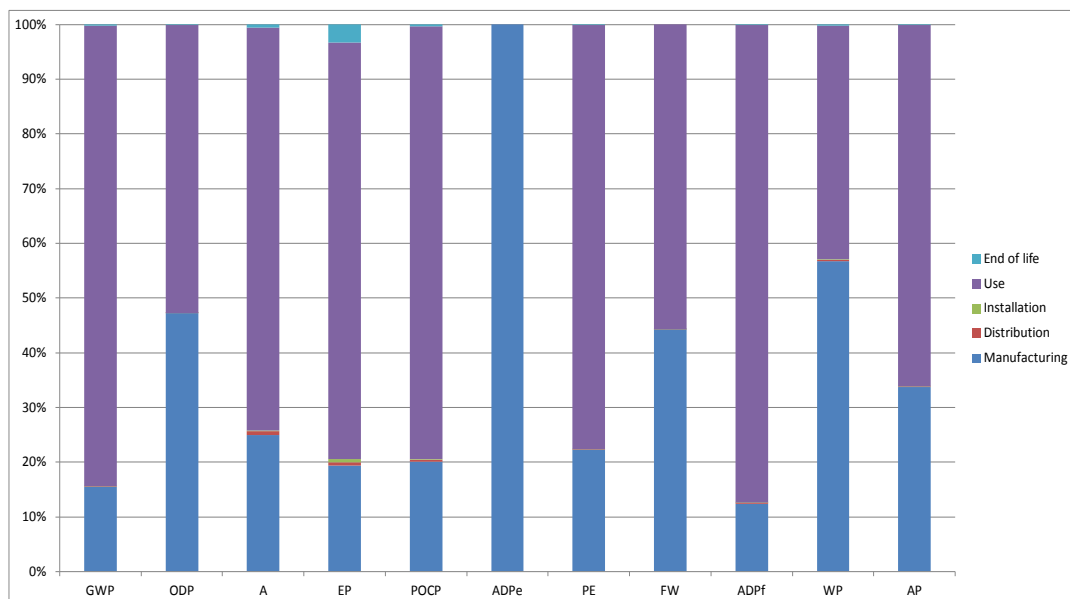


ENVIRONMENTAL IMPACTS (continued)

	Total for Life cycle		Raw material and manufacturing		Distribution		Installation		Use		End of life	
	Value	Unit	Value	%	Value	%	Value	%	Value	%	Value	%
Global warming (GW)	5.10E+00	kgCO2 eq.	7.86E-01	15%	8.33E-03	< 1%	2.27E-03	< 1%	4.29E+00	84%	8.64E-03	< 1%
Ozone depletion (OD)	1.48E-07	kgCFC-11 eq.	6.98E-08	47%	1.69E-11	< 1%	1.25E-11	< 1%	7.79E-08	53%	1.50E-10	< 1%
Acidification of soil and water (A)	5.59E-03	kgSO2 eq.	1.39E-03	25%	3.74E-05	< 1%	1.09E-05	< 1%	4.11E-03	74%	3.45E-05	< 1%
Water eutrophication (WE)	1.42E-03	kg(P04)3- eq.	2.76E-04	19%	8.60E-06	< 1%	9.34E-06	< 1%	1.08E-03	76%	4.77E-05	3%
Photochemical ozone creation (POCP)	8.32E-04	kgC2H4 eq.	1.68E-04	20%	2.66E-06	< 1%	7.67E-07	< 1%	6.59E-04	79%	2.64E-06	< 1%
Depletion of abiotic resources - elements (ADPe)	4.27E-04	kgSb eq.	4.27E-04	100%	3.33E-10	< 1%	9.64E-11	< 1%	4.22E-08	< 1%	4.74E-10	< 1%
Total use of primary energy (PE)	7.46E+01	MJ	1.66E+01	22%	1.12E-01	< 1%	3.00E-02	< 1%	5.78E+01	77%	9.66E-02	< 1%
Net use of fresh water (FW)	1.36E-02	m3	6.04E-03	44%	7.45E-07	< 1%	5.69E-07	< 1%	7.59E-03	56%	5.30E-06	< 1%
Depletion of abiotic resources - fossil fuels (ADPf)	7.79E+01	MJ	9.69E+00	12%	1.17E-01	< 1%	3.16E-02	< 1%	6.80E+01	87%	1.19E-01	< 1%
Water pollution (WP)	4.96E+02	m3	2.81E+02	57%	1.37E+00	< 1%	3.57E-01	< 1%	2.12E+02	43%	1.09E+00	< 1%
Air pollution (AP)	5.52E+02	m3	1.86E+02	34%	3.41E-01	< 1%	2.33E-01	< 1%	3.65E+02	66%	7.95E-01	< 1%

The values of the 27 impacts defined in the PCR-ed3-EN-2015 04 02 are available in the digital database of pep-ecopassport.org website. The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family.

% Environmental Impact per Life Cycle Stage of Reference Product



The environmental impact of the Reference Product occurs predominantly during the Use and Manufacturing phases.

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Pass & Seymour: Radiant Decorator Switches



ENVIRONMENTAL IMPACTS (continued)

For products covered by the PEP other than the Reference product, the environmental impacts of each phase of the lifecycle are calculated by multiplying the Reference Product impacts by the factors listed below.

Part Number	Manufacturing	Distribution	Installation	Use	End of Life	Sum
TM870 TM873	.62	.63	.68	1	.62	.86

Registration number: LGRP-00532-V01.01-EN	Drafting rules: "PCR-ed3-EN-2015 04 02" Supplemented by "PSR-0005-ed1-EN-2012 12 11"
Verifier's accreditation number: VH02	Information and reference documents: www.pep-ecopassport.org
Date of issue: 11-2017	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal <input checked="" type="checkbox"/> External <input type="checkbox"/>	
The PCR Review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN).	
The elements of the present PEP cannot be compared with elements from another program.	
Document in compliance with ISO 14025:2010: "Environmental labels and declarations - Type III environmental declarations"	
In compliance with ISO 14040:2006: "Environmental management - LCA - Principles and framework"	
In compliance with ISO 14044:2006: "Environmental management - LCA - Requirements and guidelines"	
In alignment with EN 15804:2012+A1:2013: "Sustainability of construction works - EPD's - Core rules for the product category of construction products"	