Legrand North and Central America
Pass & Seymour
50 Boyd Ave.
Syracuse, NY 13209
1.877.BY.LEGRAND (295.3472)
www.legrand.us

Product Environmental Profile

Pass & Seymour: 3.1A USB Chargers with Duplex Receptacles

COMPANY OVERVIEW

• Sustainability built in to support our associates, customers, and the environment
At Legrand North and Central 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	To make available Class 2 USB connections with a combined charging capacity of 3.1A under a voltage of 5Vdc to be used with USB 2.0 or 3.0 devices and To connect/disconnect the plug of a load consuming a maximum of 15A under a voltage of 125V to an electric power supply while protecting the user from direct contact with live parts for 20 years.
Reference Product	
	Part Number TM826USBW
	radiant® 3.1A A/A USB Chargers with Duplex 15A Tamper-Resistant Receptacle, White

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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PEP ecopassport®

PRODUCTS CONCERNED

The environmental data is representative of the following products:

Description (with catalog #s):

Grade + Amperage \ *USB Type*	*A/A*	*A/C*	*C/C*
radiant® 3.1A USBs with 15A Receptacles	TM826USB^*	R26USBAC^*	R26USBCC^*
Spec-Grade 3.1A USBs with 15/20A Receptacles	TR5262USB^* TR5362USB^*	TR15USBAC^* TR20USBAC^*	TR15USBCC^* TR20USBCC^*
Hospital Grade 3.1A USBs with 15/20A Receptacles	TR8200HUSB^* TR8300HUSB^*	TR15HUSBAC^* TR20HUSBAC^*	TR15HUSBCC^* TR20HUSBCC^*

Where ^ represents a possbile color suffix and * represents a posible packaging suffix.

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	**147.5 g (5.20oz)**

Plastics as % of weight		**Metals as % of weight**		**Others as % of weight**	
Product					
PA (polyamide - nylon)	**21.0%**	Steel	**14.8%**	Various Electronic Components	**16.1%**
PVC (polyvinyl chloride	**8.5%**	Copper Alloys	**7.0%**	Electronic Circuit Board	**4.3%**
POM (polyoxymethylene)	**0.6%**			Electric Wire	**0.2%**
Packaging					
PE (polyethylene)	**0.6%**			paper/cardboard	**22.9%**
				wood (pallet)	**4.0%**
Total plastics	**30.6%**	**Total metals**	**21.8%**	**Total others**	**47.6%**

Estimated recycled material content: 24% of weight.

All products covered by this PEP have the same material breakdown and estimated recyelced content.

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. Due to highly variable distribution, an average of 1200 km by heavy truck was used. This represents transportation of the Reference Product from our warehouse to the local point of distribution in the North American market.

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PEP ecopassport®

INSTALLATION

For the installation of the 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.

Energy:
Electricity is needed to run the internal electronics of the product in order to provide power to the load(s) connected to the USB port(s). Electricity is also lost due to the Joule effect during the use of the receptacles. Using the methods described in PSR-005-ed2-2016 03 29 for USB sockets and power sockets, the total energy use over the life of the product is estimated to be 182 kWh. This figure does not inlcude the electricity passing through the product that is consumed by the load(s) as that energy use is not attributed to the product.

END OF LIFE

• **Hazardous waste* contained in the product:** no hazardous waste
(*) 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 (including packaging) is estimated as 80%. 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 (including Packaging) that is recyclable
- plastic materials (excluding packaging):	29%
- metal materials (excluding packaging):	22%
- other materials (excluding packaging):	3%
-packaging (all types of materials):	27%

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.
Installation	The end of life of the packaging (40.7g) is taken into account at this phase. Transport of packaging to end of life treatment.
Use	• 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: USB Socket/Power Socket • Use scenario: for a 20 year working life, the USB portion of the product operates at 100% of the rated load for 30% of the time and the receptacle portion of the product operates at 50% of the rated load for 50% of the time. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity(US) - 2009
End of life	The default end of life scenario modelled maximizes the environmental impact using the PCR hypothesis for "Local transport": 621 miles (1000 km) by heavy truck and landfilling.
Software used	EIME V5 and its database "CODDE-2016-11" and the indicators defined in the PCR ed 3 in alignment with the EN15804 standard

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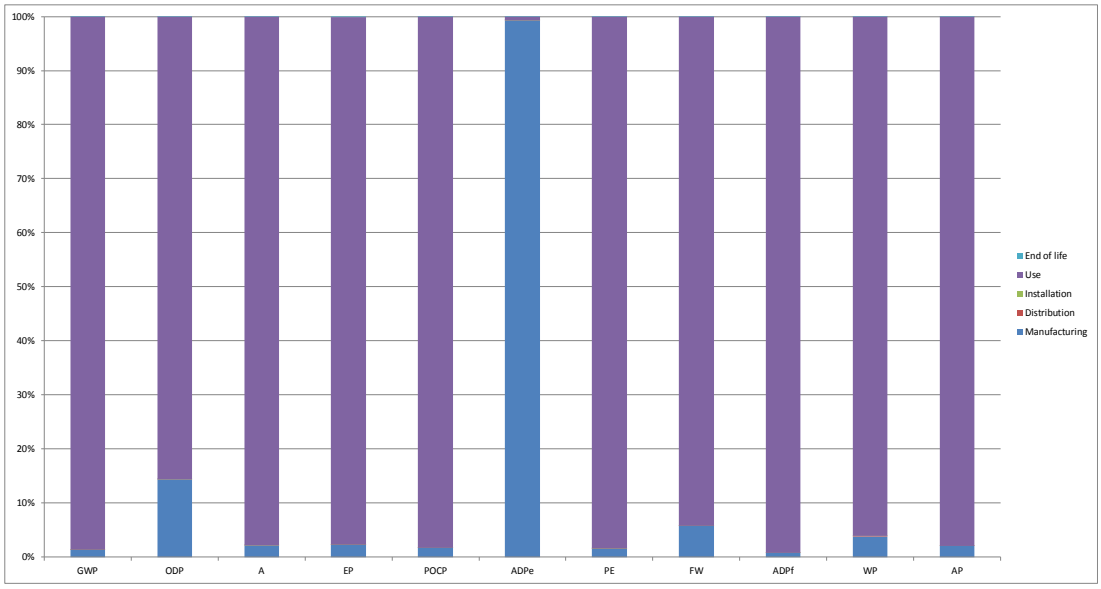
ENVIRONMENTAL IMPACTS (continued)

	Total for Life cycle		Raw material and manufacturing		Distribution		Installation		Use		End of life	
Global warming (GW)	**1.28E+02**	**kg CO_2 eq.**	1.75E+00	**1%**	8.81E-03	**< 1%**	2.51E-03	**< 1%**	1.26E+02	**99%**	1.11E-02	**< 1%**
Ozone depletion (OD)	**2.68E-06**	**kg CFC-11 eq.**	3.86E-07	**14%**	1.79E-11	**< 1%**	1.77E-11	**< 1%**	2.29E-06	**86%**	2.44E-10	**< 1%**
Acidification of soil and water (A)	**1.24E-01**	**kg SO_2 eq.**	2.71E-03	**2%**	3.96E-05	**< 1%**	1.21E-05	**< 1%**	1.21E-01	**98%**	4.31E-05	**< 1%**
Water eutrophication (WE)	**3.27E-02**	**kg PO_4^{3-} eq.**	7.40E-04	**2%**	9.10E-06	**< 1%**	1.19E-05	**< 1%**	3.19E-02	**98%**	5.38E-05	**< 1%**
Photochemical ozone creation (POCP)	**1.97E-02**	**kg C_2H_4 eq.**	3.42E-04	**2%**	2.81E-06	**< 1%**	8.54E-07	**< 1%**	1.94E-02	**98%**	3.34E-06	**< 1%**
Depletion of abiotic resources - elements (ADPe)	**1.93E-04**	**kg Sb eq.**	1.92E-04	**99%**	3.53E-10	**< 1%**	1.10E-10	**< 1%**	1.24E-06	**< 1%**	6.68E-10	**< 1%**
Total use of primary energy (PE)	**1.73E+03**	**MJ**	2.67E+01	**2%**	1.25E-01	**< 1%**	3.43E-02	**< 1%**	1.70E+03	**98%**	1.24E-01	**< 1%**
Net use of fresh water (FW)	**2.37E-01**	**m^3**	1.37E-02	**6%**	7.89E-07	**< 1%**	7.78E-07	**< 1%**	2.23E-01	**94%**	8.47E-06	**< 1%**
Depletion of abiotic resources – fossil fuels (ADPf)	**2.01E+03**	**MJ**	1.56E+01	**< 1%**	1.24E-01	**< 1%**	3.49E-02	**< 1%**	2.00E+03	**99%**	1.56E-01	**< 1%**
Water pollution (WP)	**6.48E+03**	**m^3**	2.50E+02	**4%**	1.45E+00	**< 1%**	3.86E-01	**< 1%**	6.22E+03	**96%**	1.31E+00	**< 1%**
Air pollution (AP)	**1.09E+04**	**m^3**	2.23E+02	**2%**	3.61E-01	**< 1%**	2.91E-01	**< 1%**	1.07E+04	**98%**	1.19E+00	**< 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.



The environmental impact of the Reference Product occurs predominantly during the use phase.

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ENVIRONMENTAL IMPACTS (continued)

For products covered by the PEP other than the Reference product, the environmental impacts of each phase of the lifecycle are assimilated to the impacts of the Reference Product.

Registration number: LGRP-00874-V01.01-EN	Drafting rules: "PCR-ed3-EN-2015 04" Supplemented by "PSR-005-ed2-2016 03 29"
Verifier's accreditation number: VH33	Information and reference documents: **www.pep-ecopassport.org**
Date of issue: 12-2018	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal ☐ External ☒	
The PCR Review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN).	
PEP are compliant with XP C08-100-1: 2014 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"	