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Product Environmental Profile

VALENA™
Socket outlet 16A

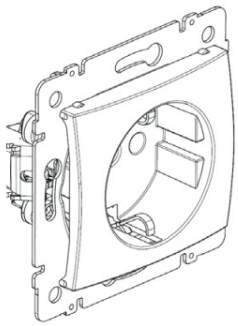
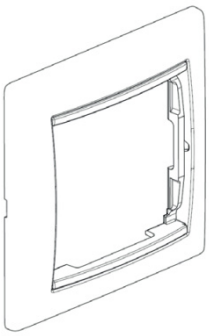
LEGRAND'S ENVIRONMENTAL COMMITMENTS

▪ **Incorporate environmental management into our industrial sites**
Of all Legrand sites worldwide, over 85% are ISO 14001-certified (sites belonging to the Group 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 and provide informations in compliance with ISO 14025**
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	Connect/disconnect the plug of a load consuming 16 A maximum under a voltage of 250 V while protecting the user from direct contact with live parts, in the Household/Commercial application areas, according to the appropriate use scenario, and for the reference service life of the product of 20 years.	
Reference Product		
	Cat.No 7 744 20	Cat.No 7 744 51
	German standard socket 2P+E 16A 250V with 1 gang plate white	

PRODUCTS CONCERNED

The environmental data is representative of the following products:

Catalogue Numbers		
2P+E socket - German std.	2P+E socket - French std.	1 gang plate
• 7 744 20 • 7 743 20 • 7 701 20	• 7 743 96 • 7 743 98 • 7 701 96	• 7 744 51 • 7 743 51 • 7 701 51

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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/EU amended by delegated directive (EU) 2015/863, and its amendment 2017/2102/EU.

Total weight of Reference Product	**0.11 kg** (all packaging included)

Product alone weight 0.08 kg					
Plastics as % of weight		**Metals as % of weight**		**Other as % of weight**	
PC	**32.2 %**	Steel	**34.7 %**		
PP	**0.6 %**	Copper and copper alloys	**8.5 %**		
PS	**<0.1 %**				

Packaging (alone) : 0.03 kg					
PE	**0.1 %**			Cardboard	**19.1 %**
				Wood	**4.7 %**
				Paper	**0.1 %**
Total plastics : 0.03 kg	**32.9 %**	**Total metals : 0.05 kg**	**43.2 %**	**Total others : 0.03 kg**	**23.9 %**

At the date of this document , the recycled content is:
- Product alone (excluding packaging): 4% by mass
- Packaging only: 68% by mass

MANUFACTURE

This Reference Product comes from a site that has received ISO14001 certification.

DISTRIBUTION

Products are distributed from logistics centres located with a view to optimize transport efficiency. The Reference Product is therefore transported over an average distance of 1325 km by road from our warehouse to the local point of distribution into the market in Europe.

Packaging is compliant with European directive 2004/12/EU concerning packaging and packaging waste.

INSTALLATION

For the installation of the product, only standard tools are needed.

USE

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

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END OF LIFE

The product end of life factors are taken into account during the design phase. Dismantling and sorting of components or materials is made as easy as possible with a view to recycling or failing that, another form of reuse. This product falls within the scope of the WEEE directive (2012/19/EU). Therefore it must be processed through local WEEE recycling/recovery channels.

▪ **Extended producer responsability:**
The sale of this product is subject to a contribution to eco-organisations in each country responsible for managing end of life products in the field of application of the European Waste Electronic and Electrical Equipment Directive.

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 from products marketed and used in Europe,in compliance with the local current standards

For each phase, the following modelling elements were taken in account:

System Limit	**Manufacture A1-A3**	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
	Distribution A4	Transport between the last Group distribution centre and an average delivery point in the sales area.
	Installation A5	The end of life of the packaging.
	Use B1-B7	▪ Product category: Power socket - PSR-0005-ed3.1-2023 12 08 § 3.10. Specific rules for the 'Sockets' family. ▪ Use scenario : non-continuous operation for 20 years at 10% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement. ▪ Energy model: Electricity Mix_Low voltage_2018_Europe_EU-27 - 2018.
	End of life C1-C4	Choice of end-of-life by default model for PCR-ed4-EN-2021 09 06.
D Module		Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and burdens beyond the boundaries of the system, and are not to be included in the life cycle totals.
Software and database used		EIME V6 & its database 2024-01-24

Unless otherwise indicated the modelling energetic mix are those integrated in the data modules used from the aformentioned database.

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ENVIRONMENTAL IMPACTS

	Total Life Cycle		Manufacturing	Distribution	Installation	Use[1]			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Climate change - total	**6.55E-01**	**kg CO_2 eq.**	4.86E-01	7.21E-03	1.04E-02	3.38E-02	0.00E+00	3.38E-02	1.18E-01	-1.06E-01
Climate change - fossil fuels	**6.43E-01**	**kg CO_2 eq.**	4.75E-01	7.21E-03	1.04E-02	3.38E-02	0.00E+00	3.38E-02	1.17E-01	-1.09E-01
Climate change - biogenics	**1.22E-02**	**kg CO_2 eq.**	1.10E-02	0.00E+00	1.54E-05	4.51E-05	0.00E+00	4.51E-05	1.18E-03	2.30E-03
Climate change - land use and land use transformation	**5.18E-05**	**kg CO_2 eq.**	5.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-08	0.00E+00
Ozone depletion	**1.77E-08**	**kg CFC-11 eq.**	1.47E-08	1.10E-11	3.23E-10	1.45E-10	0.00E+00	1.45E-10	2.50E-09	-7.21E-10
Acidification (AP)	**3.49E-03**	**mole of H+ eq.**	2.59E-03	4.56E-05	6.21E-05	1.93E-04	0.00E+00	1.93E-04	5.92E-04	-6.57E-04
Freshwater eutrophication	**4.86E-05**	**kg P eq.**	1.26E-05	0*	7.67E-09	9.26E-08	0.00E+00	9.26E-08	3.59E-05	3.09E-07
Marine aquatic eutrophication	**5.08E-04**	**kg of N eq.**	3.39E-04	2.14E-05	1.67E-05	2.19E-05	0.00E+00	2.19E-05	1.08E-04	-4.14E-05
Terrestrial eutrophication	**5.80E-03**	**mole of N eq.**	3.71E-03	2.34E-04	2.12E-04	3.29E-04	0.00E+00	3.29E-04	1.31E-03	-5.50E-04
Photochemical ozone formation	**1.84E-03**	**kg NMVOC eq.**	1.28E-03	5.91E-05	4.70E-05	7.04E-05	0.00E+00	7.04E-05	3.74E-04	-2.59E-04
Depletion of abiotic resources - elements	**1.29E-05**	**kg Sb eq.**	1.17E-05	0*	0*	2.45E-09	0.00E+00	2.45E-09	1.15E-06	-2.78E-06
Depletion of abiotic resources - fossil fuels	**2.90E+01**	**MJ**	2.10E+01	1.00E-01	1.86E-01	8.62E-01	0.00E+00	8.62E-01	6.84E+00	-9.45E+00
Water requirement	**2.22E-01**	**m^3 deprivation worldwide eq.**	1.56E-01	2.73E-05	3.90E-04	1.20E-03	0.00E+00	1.20E-03	6.41E-02	-6.10E-02
Emission of fine particles	**2.16E-08**	**incidence of diseases**	1.60E-08	3.71E-10	4.39E-10	1.50E-09	0.00E+00	1.50E-09	3.30E-09	-3.46E-09

*Represents less than 0.01% of the total life cycle of the reference flow

[1] For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

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	Total Life Cycle		Manufacturing	Distribution	Installation	Use[1]			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Ionizing radiation, human health	**7.13E+00**	**kBq of U235 eq.**	7.06E+00	0*	3.83E-03	5.03E-02	0.00E+00	5.03E-02	1.05E-02	-5.84E-01
Ecotoxicity (fresh water)	**1.15E+01**	**CTUe**	7.34E+00	4.85E-03	1.50E-01	3.64E-01	0.00E+00	3.64E-01	3.61E+00	2.59E-01
Human toxicity, carcinogenic effects	**1.08E-07**	**CTUh**	1.08E-07	0*	0*	0*	0.00E+00	0*	5.09E-11	-3.63E-08
Human toxicity, non-carcinogenic effects	**3.66E-08**	**CTUh**	3.12E-08	1.37E-11	9.35E-11	1.56E-10	0.00E+00	1.56E-10	5.05E-09	-7.47E-09
Impacts related to land use/soil quality	**2.96E-01**	**-**	1.87E-01	0.00E+00	1.78E-04	6.73E-04	0.00E+00	6.73E-04	1.08E-01	2.20E-04
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	**5.72E-01**	**MJ**	3.42E-01	1.34E-04	1.28E-02	1.65E-01	0.00E+00	1.65E-01	5.18E-02	-8.21E-02
Use of renewable primary energy resources used as raw materials	**2.37E-01**	**MJ**	2.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-01
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	**8.09E-01**	**MJ**	5.79E-01	1.34E-04	1.28E-02	1.65E-01	0.00E+00	1.65E-01	5.18E-02	2.35E-01
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	**2.77E+01**	**MJ**	1.97E+01	1.00E-01	1.86E-01	8.62E-01	0.00E+00	8.62E-01	6.84E+00	-9.44E+00
Use of non-renewable primary energy resources used as raw materials	**1.30E+00**	**MJ**	1.30E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.25E-03
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	**2.90E+01**	**MJ**	2.10E+01	1.00E-01	1.86E-01	8.62E-01	0.00E+00	8.62E-01	6.84E+00	-9.45E+00

*Represents less than 0.01% of the total life cycle of the reference flow
[1] For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table
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	Total Life Cycle		Manufacturing	Distribution	Installation	Use[1]			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Use of secondary materials	**2.24E-02**	**kg**	2.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	**0.00E+00**	**MJ**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	**0.00E+00**	**MJ**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	**5.80E-03**	**m³**	4.25E-03	6.37E-07	1.51E-05	2.79E-05	0.00E+00	2.79E-05	1.50E-03	-1.42E-03
Hazardous waste disposed of	**8.30E-01**	**kg**	7.15E-01	0.00E+00	9.58E-03	6.32E-04	0.00E+00	6.32E-04	1.05E-01	-2.55E-01
Non-hazardous waste disposed of	**2.32E-01**	**kg**	2.22E-01	2.53E-04	1.37E-03	4.87E-03	0.00E+00	4.87E-03	3.30E-03	1.28E-02
Radioactive waste disposed of	**1.42E-04**	**kg**	1.39E-04	1.80E-07	5.77E-07	1.02E-06	0.00E+00	1.02E-06	1.72E-06	5.65E-06
Components for re-use	**0.00E+00**	**kg**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	**4.69E-02**	**kg**	1.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-02	0.00E+00
Materials for energy recovery	**0.00E+00**	**MJ by energy vector**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	**0.00E+00**	**MJ**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of primary energy during the life cycle	**2.98E+01**	**MJ**	2.15E+01	1.01E-01	1.99E-01	1.03E+00	0.00E+00	1.03E+00	6.89E+00	-9.21E+00
Biogenic carbon content of the product	**0.00E+00**	**kg of C**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	**7.78E-03**	**kg of C**	7.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*Represents less than 0.01% of the total life cycle of the reference flow

[1] For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table

In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

The values of the indicators defined in the PCR-ed4-EN-2021 09 06 are available in the digital database of pep-ecopassport.org website.

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Socket outlet 16A

The environmental impacts are calculated for a configuration composed by a socket-outlet with a rocker and a plate (Reference Product).
For color configurations different from that of the Reference Product, take the same values as the Reference Product for each environmental impact at each phase of the lifecycle.
For the configurations with a French standard socket-outlet, the environmental impacts of each phase of the lifecycle are calculated by applying the following cofficients on those of the Reference Product.

Coefficient of extrapolation of environnemental indicators						
	Total life Cycle	Manufacturing	Distribution	Installation	Use	End of life
Climate change - total	1.0	1.0	1.0	1.0	1.8	1.0
Climate change - fossil fuels	1.0	1.0	1.0	1.0	1.8	1.0
Climate change - biogenics	1.0	1.0	0.0	1.0	1.8	0.9
Climate change - land use and land use transformation	1.0	1.0	0.0	0.0	0.0	0.9
Ozone depletion	0.9	0.9	1.0	1.0	1.8	1.0
Acidification (AP)	1.0	0.9	1.0	1.0	1.8	1.0
Freshwater eutrophication	0.9	0.9	1.0	1.0	1.8	0.9
Marine aquatic eutrophication	1.0	1.0	1.0	1.0	1.8	1.0
Terrestrial eutrophication	1.0	1.0	1.0	1.0	1.8	1.0
Photochemical ozone formation	1.0	1.0	1.0	1.0	1.8	1.0
Depletion of abiotic resources - elements	0.9	0.9	1.0	1.0	1.8	0.9
Depletion of abiotic resources - fossil fuels	1.0	1.0	1.0	1.0	1.8	1.0
Water requirement	0.9	0.9	1.0	1.0	1.8	0.9
Emission of fine particles	1.0	0.9	1.0	1.0	1.8	1.0
Ionizing radiation, human health	0.3	0.3	1.0	1.0	1.8	1.0
Ecotoxicity (fresh water)	0.9	0.9	1.0	1.0	1.8	0.9
Human toxicity, carcinogenic effects	0.9	0.9	1.0	1.0	1.8	0.9
Human toxicity, non-carcinogenic effects	0.9	0.9	1.0	1.0	1.8	0.9
Impacts related to land use/soil quality	0.9	1.0	0.0	1.0	1.8	0.9
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	1.1	0.9	1.0	1.0	1.8	0.9
Use of renewable primary energy resources used as raw materials	1.0	1.0	0.0	0.0	0.0	0.0
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1.1	0.9	1.0	1.0	1.8	0.9
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	1.0	1.0	1.0	1.0	1.8	1.0
Use of non-renewable primary energy resources used as raw materials	0.9	0.9	0.0	0.0	0.0	0.0
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1.0	1.0	1.0	1.0	1.8	1.0
Use of secondary materials	1.0	1.0	0.0	0.0	0.0	0.0
Use of renewable secondary fuels	0.0	0.0	0.0	0.0	0.0	0.0
Use of non-renewable secondary fuels	0.0	0.0	0.0	0.0	0.0	0.0
Net use of fresh water	0.9	0.9	1.0	1.0	1.8	0.9
Hazardous waste disposed of	0.9	0.9	0.0	1.0	1.8	1.0
Non-hazardous waste disposed of	1.0	1.0	1.0	1.0	1.8	1.0
Radioactive waste disposed of	1.0	1.0	1.0	1.0	1.8	1.0
Components for re-use	0.0	0.0	0.0	0.0	0.0	0.0
Materials for recycling	1.0	1.0	0.0	0.0	0.0	1.0
Materials for energy recovery	0.0	0.0	0.0	0.0	0.0	0.0
Exported energy	0.0	0.0	0.0	0.0	0.0	0.0
Total use of primary energy during the life cycle	1.0	1.0	1.0	1.0	1.8	1.0
Biogenic carbon content of the product	0.0	0.0	0.0	0.0	0.0	0.0
Biogenic carbon content of the associated packaging	1.0	1.0	0.0	0.0	0.0	0.0

Registration number: **LGRP-00600-V02.01-EN**	Drafting rules: **PEP-PCR-ed4-2021 09 06** **Supplemented by PSR-0005-ed3.1-2023 12 08**
Verifier accreditation N°: **VH08**	Information and reference documents: **www.pep-ecopassport.org**
Date of issue: **02-2024**	Validity period: **5 years**
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006	
Internal ☐ **External** ☒	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)	
PEP are compliant with XP C08-100-1 :2016 or EN 50693 :2019 The elements of the present PEP cannot be compared with elements from another program	
Document in compliance with ISO 14025 : 2006: «Environmental labels and declarations. Type III environmental declarations»	

Environmental data in alignment with EN 15804: 2012 + A2 : 2019