

# Product Environmental Profile

## SEANO™ 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

<b>Function</b>	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 areas, according to the appropriate use scenario, and for the reference service life of the product of 20 years.	
<b>Reference Product</b>		
	Cat.No 7 651 20	Cat.No 7 651 71
2P+E socket outlet auto terminals shuttered 16A 250V with 1 gang plate white		



### PRODUCTS CONCERNED

The environmental data is representative of the following products:

Catalogue Numbers						
2P+E socket shuttered	2P+E socket without shutter	1 gang plate	2 gang plate	3 gang plate	4 gang plate	5 gang plate
• 7 651 20	• 7 651 21	• 7 651 71	• 7 651 72	• 7 651 73	• 7 651 74	• 7 651 75
• 7 652 20	• 7 652 21	• 7 652 71	• 7 652 72	• 7 652 73	• 7 652 74	• 7 652 75
• 7 653 20	• 7 653 21	• 7 653 71	• 7 653 72	• 7 653 73	• 7 653 74	• 7 653 75
• 7 654 20	• 7 654 21	• 7 654 71	• 7 654 72	• 7 654 73	• 7 654 74	• 7 654 75
		• 7 655 71	• 7 655 72	• 7 655 73	• 7 655 74	• 7 655 75
		• 7 651 81	• 7 651 82	• 7 651 83	• 7 651 84	• 7 651 85
		• 7 652 81	• 7 652 82	• 7 652 83	• 7 652 84	• 7 652 85
		• 7 653 81	• 7 653 82	• 7 653 83	• 7 653 84	• 7 653 85
		• 7 654 81	• 7 654 82	• 7 654 83	• 7 654 84	• 7 654 85
		• 7 655 81	• 7 655 82	• 7 655 83	• 7 655 84	• 7 655 85



### ■ 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.

<b>Total weight of Reference Product</b>	<b>0.13 kg</b> (all packaging included)
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Product alone weight 0.10 kg					
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	18.6 %	Steel	32.6%		
ABS	12.3 %	Copper and copper alloys	8.6 %		
PA	1.7 %				
Other plastics	0.3 %				
PS	<0.1 %				
Packaging (alone) : 0.03 kg					
PE	0.1 %			Cardboard	17.9 %
				Wood	7.0 %
				Paper	0.8 %
<b>Total plastics : 0.04 kg</b>	<b>33.1 %</b>	<b>Total metals : 0.05 kg</b>	<b>41.2 %</b>	<b>Total others : 0.04 kg</b>	<b>25.7 %</b>

At the date of this document, the recycled content is:

- Product alone (excluding packaging): 13% by mass
- Packaging only: 57% 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 18 km by road from our warehouse to the local point of distribution into the market in Austria.

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 responsibility:**

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 Austria.

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

<b>System Limit</b>	<b>Manufacture A1-A3</b>	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
	<b>Distribution A4</b>	Transport between the last Group distribution centre and an average delivery point in the sales area.
	<b>Installation A5</b>	The end of life of the packaging.
	<b>Use B1-B7</b>	<ul style="list-style-type: none"> <li>Product category: Power socket - PSR-0005-ed3.1-2023 12 08 § 3.10. Specific rules for the 'Sockets' family.</li> <li>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.</li> <li>Energy model: Electricity Mix_Low voltage_2018_Austria_AT - 2018.</li> </ul>
	<b>End of life C1-C4</b>	Choice of end-of-life by default model for PCR-ed4-EN-2021 09 06.
<b>D Module</b>	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.	
<b>Software and data-base used</b>	EIME V6 & its database 2024-01-24	

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

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## ENVIRONMENTAL IMPACTS

	Total Life Cycle		Manufacturing	Distribution	Installation	Use <sup>(1)</sup>			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Climate change - total	7.20E-01	kg CO <sub>2</sub> eq.	5.41E-01	1.15E-04	1.16E-02	3.50E-02	0.00E+00	3.50E-02	1.32E-01	-9.08E-02
Climate change - fossil fuels	7.08E-01	kg CO <sub>2</sub> eq.	5.30E-01	1.15E-04	1.16E-02	3.49E-02	0.00E+00	3.49E-02	1.31E-01	-9.39E-02
Climate change - biogenics	1.21E-02	kg CO <sub>2</sub> eq.	1.06E-02	0.00E+00	1.95E-05	3.42E-05	0.00E+00	3.42E-05	1.35E-03	3.16E-03
Climate change - land use and land use transformation	2.33E-05	kg CO <sub>2</sub> eq.	2.33E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-08	1.03E-05
Ozone depletion	2.90E-07	kg CFC-11 eq.	2.86E-07	0*	4.02E-10	8.59E-11	0.00E+00	8.59E-11	3.51E-09	-1.73E-09
Acidification (AP)	4.34E-03	mole of H+ eq.	3.40E-03	7.28E-07	6.86E-05	1.94E-04	0.00E+00	1.94E-04	6.74E-04	-1.04E-03
Freshwater eutrophication	5.62E-05	kg P eq.	1.47E-05	0*	9.16E-09	0*	0.00E+00	0*	4.14E-05	4.68E-07
Marine aquatic eutrophication	5.60E-04	kg of N eq.	4.01E-04	3.41E-07	1.66E-05	2.04E-05	0.00E+00	2.04E-05	1.22E-04	-3.80E-05
Terrestrial eutrophication	6.58E-03	mole of N eq.	4.35E-03	3.74E-06	2.18E-04	5.35E-04	0.00E+00	5.35E-04	1.48E-03	-5.23E-04
Photochemical ozone formation	2.04E-03	kg NMVOC eq.	1.51E-03	9.44E-07	4.68E-05	5.97E-05	0.00E+00	5.97E-05	4.22E-04	-2.72E-04
Depletion of abiotic resources - elements	1.92E-05	kg Sb eq.	1.79E-05	0*	0*	5.47E-09	0.00E+00	5.47E-09	1.32E-06	-6.09E-06
Depletion of abiotic resources - fossil fuels	3.05E+01	MJ	2.23E+01	0*	2.15E-01	4.88E-01	0.00E+00	4.88E-01	7.55E+00	-9.02E+00
Water requirement	2.75E-01	m <sup>3</sup> deprivation worldwide eq.	2.00E-01	0*	4.84E-04	1.03E-03	0.00E+00	1.03E-03	7.28E-02	-8.25E-02
Emission of fine particles	2.62E-08	incidence of diseases	2.08E-08	5.92E-12	4.76E-10	1.18E-09	0.00E+00	1.18E-09	3.79E-09	-5.67E-09

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

<sup>(1)</sup> 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 <sup>(1)</sup>			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
<b>Ionizing radiation, human health</b>	<b>3.06E+00</b>	<b>kBq of U235 eq.</b>	3.05E+00	0*	4.85E-03	0*	0.00E+00	0*	1.20E-02	-1.28E+00
<b>Ecotoxicity (fresh water)</b>	<b>3.19E+01</b>	<b>CTUe</b>	2.73E+01	0*	1.87E-01	2.51E-01	0.00E+00	2.51E-01	4.14E+00	2.03E-01
<b>Human toxicity, carcinogenic effects</b>	<b>1.75E-07</b>	<b>CTUh</b>	1.75E-07	0*	0*	0*	0.00E+00	0*	5.90E-11	-7.97E-08
<b>Human toxicity, non-carcinogenic effects</b>	<b>5.16E-08</b>	<b>CTUh</b>	4.57E-08	0*	1.14E-10	1.02E-10	0.00E+00	1.02E-10	5.70E-09	-1.29E-08
<b>Impacts related to land use/soil quality</b>	<b>2.39E-01</b>	<b>-</b>	1.14E-01	0.00E+00	2.25E-04	1.15E-03	0.00E+00	1.15E-03	1.23E-01	2.89E-02
<b>Use of renewable primary energy, excluding renewable primary energy resources used as raw materials</b>	<b>1.20E+00</b>	<b>MJ</b>	2.42E-01	0*	1.62E-02	8.78E-01	0.00E+00	8.78E-01	6.01E-02	-6.44E-02
<b>Use of renewable primary energy resources used as raw materials</b>	<b>3.37E-01</b>	<b>MJ</b>	3.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-01
<b>Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)</b>	<b>1.53E+00</b>	<b>MJ</b>	5.79E-01	0*	1.62E-02	8.78E-01	0.00E+00	8.78E-01	6.01E-02	2.86E-01
<b>Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials</b>	<b>2.92E+01</b>	<b>MJ</b>	2.09E+01	0*	2.15E-01	4.88E-01	0.00E+00	4.88E-01	7.55E+00	-9.14E+00
<b>Use of non-renewable primary energy resources used as raw materials</b>	<b>1.33E+00</b>	<b>MJ</b>	1.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01
<b>Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)</b>	<b>3.05E+01</b>	<b>MJ</b>	2.23E+01	0*	2.15E-01	4.88E-01	0.00E+00	4.88E-01	7.55E+00	-9.02E+00

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

<sup>(1)</sup> 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 <sup>(1)</sup>			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Use of secondary materials	3.45E-02	kg	3.45E-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	6.69E-03	m <sup>3</sup>	4.94E-03	0*	1.88E-05	2.40E-05	0.00E+00	2.40E-05	1.71E-03	-1.80E-03
Hazardous waste disposed of	1.22E+00	kg	1.09E+00	0.00E+00	1.20E-02	4.89E-04	0.00E+00	4.89E-04	1.18E-01	-5.59E-01
Non-hazardous waste disposed of	2.22E-01	kg	2.08E-01	0*	1.67E-03	4.05E-03	0.00E+00	4.05E-03	8.60E-03	3.03E-02
Radioactive waste disposed of	1.44E-04	kg	1.37E-04	0*	6.91E-07	2.68E-07	0.00E+00	2.68E-07	5.99E-06	1.43E-05
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	5.51E-02	kg	1.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-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	3.21E+01	MJ	2.28E+01	0*	2.31E-01	1.37E+00	0.00E+00	1.37E+00	7.61E+00	-8.74E+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	1.01E-02	kg of C	1.01E-02	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

<sup>(1)</sup> 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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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 socket-outlet without shutters, the environmental impacts of each phase of the lifecycle are calculated by applying the following coefficients on those of the Reference Product.

Moreover, for the multi-gang configurations, the described environmental impacts of 2P+E socket shuttered or without shutter have to be multiplied by the number of installed products

Environmental impact indicators	Coefficient of extrapolation of environmental indicators					
	Total life Cycle	Manufacturing	Distribution	Installation	Use	End of life
Climate change - total	0.9	0.9	1.0	1.0	0.9	1.0
Climate change - fossil fuels	0.9	0.9	1.0	1.0	0.9	1.0
Climate change - biogenics	0.9	0.9	0.0	1.0	0.9	1.0
Climate change - land use and land use transformation	1.0	1.0	0.0	0.0	0.0	1.0
Ozone depletion	0.1	0.1	1.0	1.0	0.9	1.0
Acidification (AP)	1.0	1.0	1.0	1.0	0.9	1.0
Freshwater eutrophication	1.0	1.0	1.0	1.0	0.9	1.0
Marine aquatic eutrophication	1.0	1.0	1.0	1.0	0.9	1.0
Terrestrial eutrophication	1.0	1.0	1.0	1.0	0.9	1.0
Photochemical ozone formation	1.0	1.0	1.0	1.0	0.9	1.0
Depletion of abiotic resources - elements	1.0	1.0	1.0	1.0	0.9	1.0
Depletion of abiotic resources - fossil fuels	1.0	1.0	1.0	1.0	0.9	1.0
Water requirement	1.0	1.0	1.0	1.0	0.9	1.0
Emission of fine particles	1.0	1.0	1.0	1.0	0.9	1.0
Ionizing radiation, human health	1.0	1.0	1.0	1.0	0.9	1.0
Ecotoxicity (fresh water)	0.5	0.4	1.0	1.0	0.9	1.0
Human toxicity, carcinogenic effects	0.9	0.9	1.0	1.0	0.9	1.0
Human toxicity, non-carcinogenic effects	1.0	1.0	1.0	1.0	0.9	1.0
Impacts related to land use/soil quality	1.0	1.0	0.0	1.0	0.9	1.0
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	0.9	1.0	1.0	1.0	0.9	1.0
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)	0.9	1.0	1.0	1.0	0.9	1.0
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	1.0	1.0	1.0	1.0	0.9	1.0
Use of non-renewable primary energy resources used as raw materials	1.0	1.0	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	0.9	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	1.0	1.0	1.0	1.0	0.9	1.0
Hazardous waste disposed of	1.0	1.0	0.0	1.0	0.9	1.0
Non-hazardous waste disposed of	1.0	1.0	1.0	1.0	0.9	1.0
Radioactive waste disposed of	1.0	1.0	1.0	1.0	0.9	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	0.9	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: <b>LGRP-01958-V01.01-EN</b>	Drafting rules: <b>PEP-PCR-ed4-2021 09 06</b> <b>Supplemented by PSR-0005-ed3.1-2023 12 08</b>
Verifier accreditation N°: <b>VH08</b>	Information and reference documents: <b>www.pep-ecopassport.org</b>
Date of issue: <b>03-2024</b>	Validity period: <b>5 years</b>
<b>Independent verification of the declaration and data, in compliance with ISO 14025 : 2006</b>	
Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)	
PEP are compliant with NF C08-100-1 :2016 and EN 50693 :2019 or NF E38-500 :2022 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