

# Product Environmental Profile

## Nuvo Players P3100, P300, P200, P100



### 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](http://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

<p><b>Function</b></p>	<p>Delivers high-fidelity audio and 40 watts of power per zone, to three separate zones simultaneously, during a typical lifetime of 10 years. Compatible with wired 10/100Base-T Ethernet or wireless IEEE 802.11n configurations. Supports media in standard audio formats accessible from networked computers, mobile devices, and streaming Internet Radio.</p>
<p><b>Reference Product</b></p>	<div style="text-align: center;">  </div> <p>Part Number NV-P3100-NA                  Professional grade 3 ZONE stereo amplifier</p>

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:

- NV-P100-NA
- NV-P200-NA
- NV-P300-NA



## 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.

<b>Total weight of Reference Product (with unit packaging)</b>		<b>148.14 oz (4200 g)</b>			
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PVC	2.5%	Steel	44.7%	Various electronic components	14.2%
ABS	1.1%	Al	7.2%	Electronic card	5.4%
PC	0.8%	Copper alloys	5.0%	Glass	<0.1%
PA	<0.1%				
Other Plastic	2.2%			Packaging as % of weight	
				Paper(Packaging)	15.7%
				PE(Packaging)	0.4%
				Other(Packaging)	0.8%
<b>Total plastics</b>	<b>6.6%</b>	<b>Total metals</b>	<b>56.9%</b>	<b>Total other and packaging</b>	<b>36.5%</b>

Estimated recycled material content: 31% 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 PCR hypothesis for "Intracontinental transport", 2175 miles (3500 km) by heavy truck was used. This represents transportation of the Reference Product from our warehouse to the local point of distribution in the United states.



### INSTALLATION

No electricity is required for installing the Reference Product.



### 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

(\* 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 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)
- plastic materials (excluding packaging):	4%
- metal materials (excluding packaging):	57%
- other materials (excluding packaging) :	3%
- Packaging (all types of materials) :	16%



### 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 United states and Europe.

The following modelling elements were taken into account:

<b>Manufacturing</b>	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.
<b>Distribution</b>	Transport between the last distribution center and an average delivery to the sales area. The default scenario modelled maximizes the environmental impact.
<b>Installation</b>	The end of life of the packaging ( 3.06 lb or 1390 g) is taken into account at this phase. Transport of packaging to end of life treatment.
<b>Use</b>	<ul style="list-style-type: none"> <li>• Under normal conditions of use, this type of product requires no servicing or maintenance.</li> <li>• No consumables are necessary to use this type of product.</li> <li>• Product category: Not applicable.</li> <li>• Use scenario: For a 10 years working life, the product has a power of 42W in Active Phase during 33% of time, in Idle Phase power of 1W during 8% of time and in Sleep phase power of 0.1W during 59% of time. This modelling duration does not constitute a minimum durability requirement.</li> <li>• Energy model: Electricity(US) - 2009</li> </ul>
<b>End of life</b>	The default end of life scenario modelled maximizes the environmental impact.
<b>Software used</b>	EIME V5 and its database "CODDE-2015-04" and the indicators defined in the PCR ed 3 in alignment with the EN15804 standard

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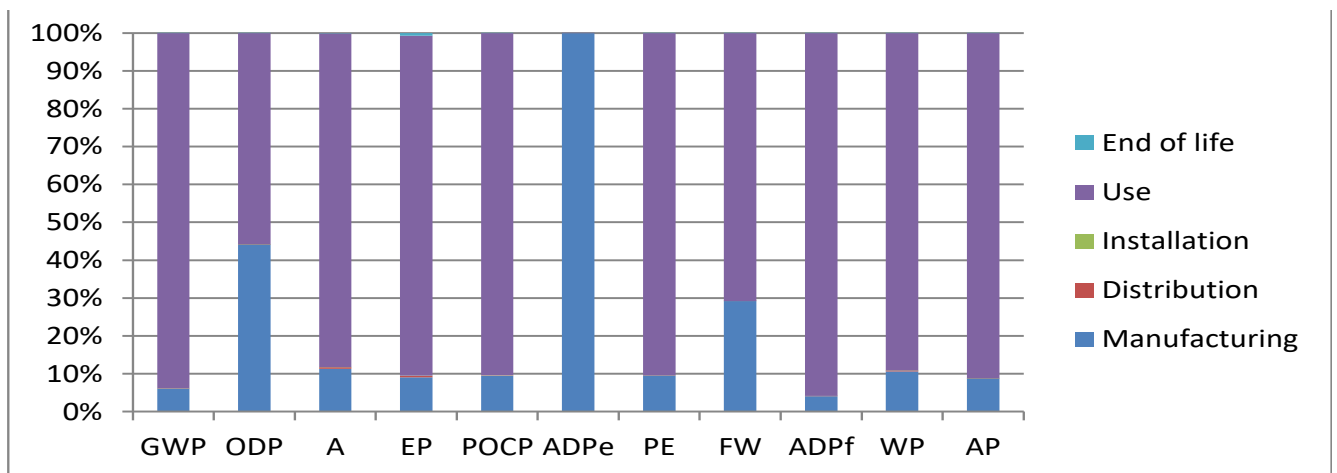


### ENVIRONMENTAL IMPACTS (continued)

	Total for Life cycle		Raw material and manufacturing		Distribution		Installation		Use		End of life	
Global warming (GW)	9.05E+02	kgCO2 eq.	5.47E+01	6%	7.32E-01	< 1%	4.61E-02	< 1%	8.49E+02	94%	2.90E-01	< 1%
Ozone depletion (OD)	2.76E-05	kgCFC-11 eq.	1.22E-05	44%	1.48E-09	< 1%	3.55E-10	< 1%	1.54E-05	56%	4.42E-09	< 1%
Acidification of soil and water (A)	9.22E-01	kgSO2 eq.	1.05E-01	11%	3.29E-03	< 1%	2.23E-04	< 1%	8.13E-01	88%	1.17E-03	< 1%
Water eutrophication (WE)	2.39E-01	kg(PO4)3- eq.	2.17E-02	9%	7.55E-04	< 1%	2.41E-04	< 1%	2.14E-01	90%	1.69E-03	< 1%
Photochemical ozone creation (POCP)	1.44E-01	kgC2H4 eq.	1.35E-02	9%	2.34E-04	< 1%	1.58E-05	< 1%	1.30E-01	90%	8.93E-05	< 1%
Depletion of abiotic resources - elements (ADPe)	4.03E-02	kgSb eq.	4.02E-02	100%	2.93E-08	< 1%	2.05E-09	< 1%	8.34E-06	< 1%	1.52E-08	< 1%
Total use of primary energy (PE)	1.27E+04	MJ	1.22E+03	10%	9.81E+00	< 1%	6.00E-01	< 1%	1.14E+04	90%	3.28E+00	< 1%
Net use of fresh water (FW)	2.12E+00	m3	6.19E-01	29%	6.55E-05	< 1%	1.56E-05	< 1%	1.50E+00	71%	1.58E-04	< 1%
Depletion of abiotic resources - fossil fuels (ADPf)	1.40E+04	MJ	5.75E+02	4%	1.03E+01	< 1%	6.41E-01	< 1%	1.34E+04	96%	3.96E+00	< 1%
Water pollution (WP)	4.70E+04	m3	5.00E+03	11%	1.20E+02	< 1%	7.03E+00	< 1%	4.19E+04	89%	3.74E+01	< 1%
Air pollution (AP)	7.91E+04	m3	6.97E+03	9%	3.00E+01	< 1%	5.80E+00	< 1%	7.21E+04	91%	2.47E+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 LIFECYCLE STAGE OF REFERENCE PRODUCT



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

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### ENVIRONMENTAL IMPACTS (continued)

For products other than the Reference Product, the environmental impacts can be estimated by weighting the environmental impacts of the Reference Product by the values shown in the table below. Impacts for Use are proportional to the energy consumption of the reference product and depend on electric consumption area. For products sold in the European market, use the table for European Market Scenarios by applying the factor 'E<sub>U</sub>' to impacts for Use as shown in the first table below. This represents electricity data using an energy model from Europe (from 2002). Impacts for Distribution, Installation and End of Life are the same as the Reference Product.

Part Number	Use
NV-P3100-NA	all impacts x E <sub>U</sub>
NV-P300-NA	all impacts x E <sub>U</sub>
NV-P200-NA	all impacts x E <sub>U</sub>
NV-P100-NA	all impacts x E <sub>U</sub>

Use in Europe(E <sub>U</sub> )
ADPe: 4.0
A: 6.7
ODP: 11.4
POCP: 2.0
all else: 1.0

Registration number: LGRP-00496-V01.01-EN	Drafting rules: "PCR-ed3-EN-2015 04"
Verifier's accreditation number: VH26	Information and reference documents: <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue: 10-2017	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>	
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"	