LEGRAND'S ENVIRONMENTAL COMMITMENTS

- **Incorporate environmental management into our industrial sites**
  Over 85% of all Legrand sites worldwide 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

<table>
<thead>
<tr>
<th>Function</th>
<th>To connect/disconnect the plug of a load consuming 20A under a voltage of 125V (nominal: 120V) while protecting the user from direct contact with live parts for 20 years.</th>
</tr>
</thead>
</table>

**Reference Product**

- **Part Number:** CR20W
  - Receptacle - Duplex; Commercial Grade; 20A/125V (NEMA 5-20R); Side Wire; White

For more information on Legrand’s PEPs and other sustainability initiatives, visit [legrand.us/sustainability](http://legrand.us/sustainability).
PRODUCTS CONCERNED

The environmental data in this PEP is representative of the following products (given with their base catalog numbers):

- Series CR20*: 20A/125V receptacles
- Series CR15*: 15A/125V receptacles
- Series 5850*: 20A/250V receptacles

Where * represents a possible color and/or packaging variation indicated by a suffix to the base catalog number (e.g., W = white). See the extrapolation rules at the end of the document for environmental impact conversion metrics between products.

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.

<table>
<thead>
<tr>
<th>Total weight of Reference Product (with unit packaging)</th>
<th>107.4 g (3.8 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC (polyvinyl chloride)</td>
<td>12.9%</td>
</tr>
<tr>
<td>PA (polyamide resin 6 - nylon)</td>
<td>11.4%</td>
</tr>
<tr>
<td>Wood (pallet)</td>
<td>11.6%</td>
</tr>
<tr>
<td>PE (polyethylene)</td>
<td>&lt;0.1%</td>
</tr>
<tr>
<td>Total plastics</td>
<td>24.3%</td>
</tr>
<tr>
<td>Total metals</td>
<td>42.3%</td>
</tr>
<tr>
<td>Total other and packaging</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

Estimated recycled material content: 33% of weight.

MANUFACTURING

The Reference Product comes from a site that has received ISO 14001 certification.

DISTRIBUTION

Products are distributed from logistics centers located to optimize transport efficiency using EPA SmartWay® certified carriers to reduce greenhouse gas emissions. Information on the distance of distribution is not available so the average distance 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.
**Product Environmental Profile**

**Pass & Seymour - Commercial Spec Grade**

**Receptacles 125/250V**

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**INSTALLATION**

No electricity is required for installing the Reference Product and only standard tools are needed.

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**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.

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**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 98%. This value is based on data collected from a technological channel using industrial procedures. It does not pre-validate the effectiveness of the use of this channel for end-of-life electrical and electronic products.

<table>
<thead>
<tr>
<th>Separated into:</th>
<th>[% mass of Reference Product]</th>
</tr>
</thead>
<tbody>
<tr>
<td>- plastic materials (excluding packaging):</td>
<td>23%</td>
</tr>
<tr>
<td>- metal materials (excluding packaging):</td>
<td>42%</td>
</tr>
<tr>
<td>- packaging (all types of materials):</td>
<td>33%</td>
</tr>
</tbody>
</table>

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**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:

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>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.</td>
</tr>
<tr>
<td>Distribution</td>
<td>Transport between the last distribution center and an average delivery to the sales area. The default scenario modelled maximizes the environmental impact.</td>
</tr>
<tr>
<td>Installation</td>
<td>The end of life of the packaging is taken into account at this phase including transport of the packaging to end of life treatment.</td>
</tr>
</tbody>
</table>
| 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: electric power socket  
                   • Use scenario: for a 20 year working life, the product operates at 50% of the rated load for 50% of the time.  
                   • Energy model: Electricity(US) - 2009 |
| End of life      | The default end of life scenario modelled maximizes the environmental impact. |
| 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 |
The environmental impact of the Reference Product occurs predominantly during the use phase.

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.
For products other than the Reference Product, the environmental impacts of each phase of the lifecycle are calculated with the following rules:

**Use phase:** The environmental impacts in the use phase come solely from the electric losses due to internal resistance when using this product. Series CR15 receptacles have lower impacts due to a smaller draw of current than the series CR20 or the series 5850 products (15A maximum compared to 20A maximum). Because power is proportional to the square of the current and internal resistance is equivalent across these receptacles, to get the use impacts of the CR15, multiply the use impacts of the CR20 by 0.5625 (15^2/20^2).

**All other phases:** The environmental impacts are identical due to equivalent manufacturing, distribution, installation, and end-of-life processes. All receptacles contain identical materials with the only differentiating factor between them being different configurations of the duplex cover which indicate the voltage and amperage ratings. Packaging for the receptacles is also almost identical with the only differentiating factor being the presence or absence of certain labels.