

# Product Environmental Profile

## SALAMANDRE trunking system - pre-galvanised finish - Standard and IP 4X ranges



### 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>	Accommodate and protect the wiring and wiring accessories along 1 meter for a reference service life of 20 years. The SALAMANDRE Standard MGR44 system with cross-section 4252 mm <sup>2</sup> includes the profile and accessories that are representative of standard use.
<b>Reference Product</b>	 <p>Cat.Nos MGR44 - MGR44CSL - MGR44ASL - MGR44E SALAMANDRE distribution trunking system 100 x 100mm Standard - pre-galvanised finish .</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.



### PRODUCTS CONCERNED

The environmental data is representative of the following products:

<b>Catalogue Numbers</b>
The full SALAMANDRE distribution trunking system, as presented in all relevant catalogues (50 x 50 to 300 x 300 Standard IP 30 and IP 4X) - details available on request from customer service team.

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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.

<b>Total weight of Reference Product</b>	<b>3454 g</b> (all packaging included)
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Plastics as % of weight		Metals as % of weight		Other as % of weight	
		Steel	<b>97.9 %</b>		
		Zamak	<b>1.0 %</b>		
<b>Packaging as % of weight</b>					
				Wood	<b>0.8 %</b>
				Paper	<b>0.3 %</b>
<b>Total plastics</b>	<b>0.0 %</b>	<b>Total metals</b>	<b>98.9 %</b>	<b>Total others</b>	<b>1.1 %</b>

Estimated recycled material content: 35 % by mass.



### ■ MANUFACTURE

The Reference Product comes from sites that, in their majority, have 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 217 km by road from our warehouse to the local point of distribution into the market in United Kingdom.

Packaging is compliant with european directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 96 % (in % of packaging weight).



### ■ 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.

**• Recyclability rate:**

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 100 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for the end of life of this product.

Separated into:

- plastic materials (excluding packaging) : 0 %
- metal materials (excluding packaging) : 99 %
- other materials (excluding packaging) : 0 %
- packaging (all types of materials) : 1 %



### 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 United Kingdom.

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

<b>Manufacture</b>	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
<b>Distribution</b>	Transport between the last Group distribution centre and an average delivery point in the sales area.
<b>Installation</b>	The end of life of the packaging.
<b>Use</b>	<ul style="list-style-type: none"> <li>• Product category: PSR-0003-ed1.1-EN-2015 10 16 - 3.2.1.1. Installation trunking systems.</li> <li>• Use scenario: no energy consumption during the 20 years working life. This modelling duration does not constitute a minimum durability requirement.</li> <li>• Energy model: Electricity Mix; Great-Britain - 2008.</li> </ul>
<b>End of life</b>	The default end of life scenario maximizing the impacts.
<b>Software and database used</b>	EIME & database CODDE-2018-11

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## SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
<b>Global warming</b>	<b>1.50E+01</b>	<b>kgCO<sub>2</sub> eq.</b>	1.42E+01	<b>94 %</b>	3.73E-02	<b>&lt; 1 %</b>	6.18E-01	<b>4 %</b>	0.00E+00	<b>0 %</b>	2.19E-01	<b>1 %</b>
<b>Ozone depletion</b>	<b>9.81E-08</b>	<b>kgCFC-11 eq.</b>	9.26E-08	<b>94 %</b>	7.56E-11	<b>&lt; 1 %</b>	3.95E-09	<b>4 %</b>	0.00E+00	<b>0 %</b>	1.40E-09	<b>1 %</b>
<b>Acidification of soils and water</b>	<b>4.04E-02</b>	<b>kgSO<sub>2</sub> eq.</b>	3.67E-02	<b>91 %</b>	1.68E-04	<b>&lt; 1 %</b>	2.62E-03	<b>6 %</b>	0.00E+00	<b>0 %</b>	9.29E-04	<b>2 %</b>
<b>Water eutrophication</b>	<b>9.44E-03</b>	<b>kg[PO<sub>4</sub>]<sup>3-</sup> eq.</b>	3.48E-03	<b>37 %</b>	3.85E-05	<b>&lt; 1 %</b>	4.37E-03	<b>46 %</b>	0.00E+00	<b>0 %</b>	1.55E-03	<b>16 %</b>
<b>Photochemical ozone formation</b>	<b>5.39E-03</b>	<b>kgC<sub>2</sub>H<sub>4</sub> eq.</b>	5.11E-03	<b>95 %</b>	1.19E-05	<b>&lt; 1 %</b>	1.96E-04	<b>4 %</b>	0.00E+00	<b>0 %</b>	6.96E-05	<b>1 %</b>
<b>Depletion of abiotic resources - elements</b>	<b>1.31E-04</b>	<b>kgSb eq.</b>	1.31E-04	<b>100 %</b>	1.49E-09	<b>&lt; 1 %</b>	2.60E-08	<b>&lt; 1 %</b>	0.00E+00	<b>0 %</b>	9.20E-09	<b>&lt; 1 %</b>
<b>Total use of primary energy</b>	<b>8.51E+02</b>	<b>MJ</b>	8.40E+02	<b>99 %</b>	5.28E-01	<b>&lt; 1 %</b>	7.75E+00	<b>&lt; 1 %</b>	0.00E+00	<b>0 %</b>	2.75E+00	<b>&lt; 1 %</b>
<b>Net use of fresh water</b>	<b>1.69E+00</b>	<b>m<sup>3</sup></b>	1.69E+00	<b>100 %</b>	3.34E-06	<b>&lt; 1 %</b>	1.58E-04	<b>&lt; 1 %</b>	0.00E+00	<b>0 %</b>	5.60E-05	<b>&lt; 1 %</b>
<b>Depletion of abiotic resources - fossil fuels</b>	<b>1.51E+02</b>	<b>MJ</b>	1.41E+02	<b>93 %</b>	5.24E-01	<b>&lt; 1 %</b>	7.57E+00	<b>5 %</b>	0.00E+00	<b>0 %</b>	2.68E+00	<b>2 %</b>
<b>Water pollution</b>	<b>2.65E+02</b>	<b>m<sup>3</sup></b>	1.39E+02	<b>53 %</b>	6.14E+00	<b>2 %</b>	8.83E+01	<b>33 %</b>	0.00E+00	<b>0 %</b>	3.13E+01	<b>12 %</b>
<b>Air pollution</b>	<b>2.11E+03</b>	<b>m<sup>3</sup></b>	2.06E+03	<b>98 %</b>	1.53E+00	<b>&lt; 1 %</b>	3.50E+01	<b>2 %</b>	0.00E+00	<b>0 %</b>	1.24E+01	<b>&lt; 1 %</b>

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.

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### SELECTION OF ENVIRONMENTAL IMPACTS (SUITE)

The environmental impact of the system, described in this document and different of the Reference Product, can be estimated by weighting the environmental impacts of the Reference Product by the corresponding factors (see under).

#### IP 30 range - single compartment

Designation	Correction factor to apply to each indicators, for each life cycle steps or to the total lifecycle
50 x 50 standard IP 30	0.45
75 x 50 standard IP 30	0.66
75 x 75 standard IP 30	0.76
100 x 50 standard IP 30	0.76
100 x 75 standard IP 30	0.88
<b>100 x 100 standard IP 30</b>	<b>1.00</b>
150 x 50 standard IP 30	1.00
150 x 75 standard IP 30	1.12
150 x 100 standard IP 30	1.22
150 x 150 standard IP 30	1.81
225 x 75 standard IP 30	1.47
225 x 100 standard IP 30	1.90
225 x 150 standard IP 30	2.21
225 x 225 standard IP 30	2.65
300 x 75 standard IP 30	2.17
300 x 100 standard IP 30	2.32
300 x 150 standard IP 30	2.61
300 x 300 standard IP 30	3.48

#### IP 30 range - 2 compartments

Designation	Correction factor to apply to each indicators, for each life cycle steps or to the total lifecycle
50 x 50 standard IP 30	0.55
75 x 50 standard IP 30	0.76
75 x 75 standard IP 30	0.88
100 x 50 standard IP 30	0.86
100 x 75 standard IP 30	1.00
100 x 100 standard IP 30	1.17
150 x 50 standard IP 30	1.10
150 x 75 standard IP 30	1.24
150 x 100 standard IP 30	1.39
150 x 150 standard IP 30	2.05
225 x 75 standard IP 30	1.60
225 x 100 standard IP 30	2.07
225 x 150 standard IP 30	2.46
225 x 225 standard IP 30	3.02
300 x 75 standard IP 30	2.30
300 x 100 standard IP 30	2.50
300 x 150 standard IP 30	2.87
300 x 300 standard IP 30	3.97

#### IP 30 range - 3 compartments

Designation	Correction factor to apply to each indicators, for each life cycle steps or to the total lifecycle
75 x 50 standard IP 30	0.86
75 x 75 standard IP 30	1.00
100 x 50 standard IP 30	0.95
100 x 75 standard IP 30	1.12
100 x 100 standard IP 30	1.33
150 x 50 standard IP 30	1.20
150 x 75 standard IP 30	1.37
150 x 100 standard IP 30	1.56
150 x 150 standard IP 30	2.29
225 x 75 standard IP 30	1.72
225 x 100 standard IP 30	2.25
225 x 150 standard IP 30	2.71
225 x 225 standard IP 30	3.39
300 x 75 standard IP 30	2.43
300 x 100 standard IP 30	2.68
300 x 150 standard IP 30	3.12
300 x 300 standard IP 30	4.46

#### IP 4X range - single compartment

Designation	Correction factor to apply to each indicators, for each life cycle steps or to the total lifecycle
50 x 50 standard IP 4X	0.46
75 x 50 standard IP 4X	0.67
75 x 75 standard IP 4X	0.77
100 x 50 standard IP 4X	0.77
100 x 75 standard IP 4X	0.89
100 x 100 standard IP 4X	1.01
150 x 50 standard IP 4X	1.01
150 x 75 standard IP 4X	1.13
150 x 100 standard IP 4X	1.23
150 x 150 standard IP 4X	1.82
225 x 75 standard IP 4X	1.48
225 x 100 standard IP 4X	1.91
225 x 150 standard IP 4X	2.22
225 x 225 standard IP 4X	2.67
300 x 75 standard IP 4X	2.18
300 x 100 standard IP 4X	2.33
300 x 150 standard IP 4X	2.63
300 x 300 standard IP 4X	3.49

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### SELECTION OF ENVIRONMENTAL IMPACTS (SUITE)

#### IP 4X range - 2 compartments

Designation	Correction factor to apply to each indicators, for each life cycle steps or to the total lifecycle
50 x 50 standard IP 4X	0.55
75 x 50 standard IP 4X	0.76
75 x 75 standard IP 4X	0.89
100 x 50 standard IP 4X	0.86
100 x 75 standard IP 4X	1.01
100 x 100 standard IP 4X	1.17
150 x 50 standard IP 4X	1.11
150 x 75 standard IP 4X	1.25
150 x 100 standard IP 4X	1.40
150 x 150 standard IP 4X	2.06
225 x 75 standard IP 4X	1.61
225 x 100 standard IP 4X	2.08
225 x 150 standard IP 4X	2.47
225 x 225 standard IP 4X	3.03
300 x 75 standard IP 4X	2.32
300 x 100 standard IP 4X	2.51
300 x 150 standard IP 4X	2.88
300 x 300 standard IP 4X	3.98

#### IP 4X range - 3 compartments

Designation	Correction factor to apply to each indicators, for each life cycle steps or to the total lifecycle
75 x 50 standard IP 4X	0.86
75 x 75 standard IP 4X	1.01
100 x 50 standard IP 4X	0.96
100 x 75 standard IP 4X	1.13
100 x 100 standard IP 4X	1.34
150 x 50 standard IP 4X	1.21
150 x 75 standard IP 4X	1.37
150 x 100 standard IP 4X	1.57
150 x 150 standard IP 4X	2.30
225 x 75 standard IP 4X	1.73
225 x 100 standard IP 4X	2.26
225 x 150 standard IP 4X	2.72
225 x 225 standard IP 4X	3.40
300 x 75 standard IP 4X	2.45
300 x 100 standard IP 4X	2.70
300 x 150 standard IP 4X	3.14
300 x 300 standard IP 4X	4.48

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Verifier accreditation N°: VH23	Information and reference documents: <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue: 05-2019	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010 Internal <input checked="" type="checkbox"/> External <input 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»	
Environmental data in alignment with EN 15804: 2012 + A1 : 2013	

