

# Product Environmental Profile

## NEXPAND Assembled Cabinet - Perforated Door



### MINKELS'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 information 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>	Protect people during 20 years against direct contact with live parts and allow IT equipment in a single enclosure or a cabinet having the following dimensions W800mm D1200mm H47U, while protecting against mechanical impacts (IK07) and the penetration of solid objects and liquids (IP2X).
<b>Reference Product</b>	<div style="text-align: center;">  </div> <p>Cat.No NEXPAND cabinet with perforated single doors front and rear, side panel left and right and a roof with cover plates (dimensions 800mm width; 1200mm depth; 47U height)</p> <p>Data in this document is generally based on the reference product. For cabinets with other dimensions consult the table and formula on page 4.</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:

<p><b>Catalogue Numbers</b></p> <ul style="list-style-type: none"> <li>• NEXPAND cabinet with perforated single doors front and rear, side panel left and right and a roof with cover plates (dimensions 800mm width; 1200mm depth; 47U height. Consult the table and formula on page 4 for cabinets with the other dimensions).</li> </ul>
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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.

<b>Total weight of Reference Product</b>	<b>138274 g</b> (all packaging included)				
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PE	0.7%	Steel	63.0%		
ABS	0.5%	Al	27.0%		
PA	0.2%	Zamak	0.7%		
PVC	<0.1%	Copper alloys	<0.1%		
PU	<0.1%				
Packaging as % of weight					
				Wood	8%
<b>Total plastics</b>	<b>1.4 %</b>	<b>Total metals</b>	<b>90.6 %</b>	<b>Total others</b>	<b>8 %</b>

Estimated recycled material content: 34 % 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 to optimize transport efficiency. The Reference Product is therefore transported over an average distance of 280 km by road from our warehouse to the local point of distribution into the European market.

Packaging is compliant with european directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 95 % (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) : 1 %
- metal materials (excluding packaging) : 91 %
- other materials (excluding packaging) : 0 %
- packaging (all types of materials) : 8 %



### 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 element is taken in account:

Unless otherwise specified, the energy models are those integrated in the modules used from the EIME database	
<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: envelope.</li> <li>• Use scenario: no energy consumption during the 20 years working life. This modelling duration does not constitute a minimum durability requirement.</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	
	Value	Unit	Value	%	Value	%	Value	%	Value	%	Value	%
<b>Global warming</b>	6.74E+02	kgCO <sub>2</sub> eq.	6.63E+02	98%	1.99E+00	< 1%	5.47E-01	< 1%	0.00E+00	0%	8.27E+00	1%
<b>Ozone depletion</b>	6.95E-05	kgCFC-11 eq.	6.94E-05	100%	4.04E-09	< 1%	1.11E-09	< 1%	0.00E+00	0%	5.72E-08	< 1%
<b>Acidification of soils and water</b>	2.88E+00	kgSO <sub>2</sub> eq.	2.83E+00	98%	8.96E-03	< 1%	2.46E-03	< 1%	0.00E+00	0%	3.49E-02	1%
<b>Water eutrophication</b>	6.62E-01	kg(PO <sub>4</sub> ) <sup>3-</sup> eq.	6.02E-01	91%	2.06E-03	< 1%	5.65E-04	< 1%	0.00E+00	0%	5.80E-02	9%
<b>Photochemical ozone formation</b>	2.31E-01	kgC <sub>2</sub> H <sub>4</sub> eq.	2.27E-01	99%	6.36E-04	< 1%	1.75E-04	< 1%	0.00E+00	0%	2.62E-03	1%
<b>Depletion of abiotic resources - elements</b>	8.08E-04	kgSb eq.	8.08E-04	100%	7.98E-08	< 1%	2.19E-08	< 1%	0.00E+00	0%	3.52E-07	< 1%
<b>Total use of primary energy</b>	2.06E+04	MJ	2.05E+04	99%	2.82E+01	< 1%	7.74E+00	< 1%	0.00E+00	0%	1.03E+02	< 1%
<b>Net use of fresh water</b>	3.78E+01	m <sup>3</sup>	3.78E+01	100%	1.78E-04	< 1%	4.90E-05	< 1%	0.00E+00	0%	2.26E-03	< 1%
<b>Depletion of abiotic resources - fossil fuels</b>	6.26E+03	MJ	6.12E+03	98%	2.80E+01	< 1%	7.69E+00	< 1%	0.00E+00	0%	1.01E+02	2%
<b>Water pollution</b>	4.26E+04	m <sup>3</sup>	4.10E+04	96%	3.28E+02	< 1%	9.00E+01	< 1%	0.00E+00	0%	1.17E+03	3%
<b>Air pollution</b>	9.59E+04	m <sup>3</sup>	9.53E+04	99%	8.17E+01	< 1%	2.24E+01	< 1%	0.00E+00	0%	4.82E+02	< 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.

For products covered by the PEP other than the Reference product, the environmental impacts of each phase of the lifecycle are calculated with  $100\% = (0,043\% \times \text{mm width}) + (0,0274\% \times \text{mm depth}) + (0,6167\% \times U \text{ height}) + 3,735\%$ .

The outcome percentage can be applied to all impact values in the table above. Contact Minkels if there are questions concerning product variations or if application of the calculation is unclear.

Registration number: LGRP-01418-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02» Supplemented by PSR-0005-ed2.0-EN-2016 03 29
Verifier accreditation N°: VH18	Information and reference documents: <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue: 11-2021	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 : 2016 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	