

**UNEQUIPPED RISING CABINETS** 

## **Product Environmental Profile**

## **Environmental Product Declaration**



HAS30/3V - 1SPB007299F0270



Document in compliance with ISO 14025: 2010 "Environmental labels and declarations. Type III environmental declarations"

ORGANIZATION		CONTACT INFORMATION					
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## **ABB Purpose & Embedding Sustainability**

ABB is committed to continually promoting and embedding sustainability across its operations and value chain, aspiring to become a role model for others to follow.

With its ABB Purpose, ABB is focusing on reducing harmful emissions, preserving natural resources and championing ethical and humane behavior.



STATUS

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## **General Information**

SECURITY LEVEL

Reference product	1SPB007299F0270 HAS30/3V
Description of the product	Unequipped rising cabinet
Functional unit	1. Protect persons during 20 years against direct contact with live parts and allow grouping monitoring, control and protection devices in a single cabinet having the following dimensions 120 mm x 325 mm x 73 mm, while protecting against the penetration of solid objects and liquids (IP20). 2. Connect during 20 years 5 clamping units between 2 or more wires with a rated voltage 230/400VAC and a voltage drop of 0,00192 V
Other products covered	N/A

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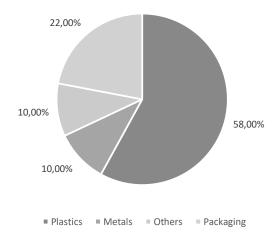
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EN

PAGE

2/10

# Constituent materials



Total weight of Reference product in kg including packaging

0,828241587

Plastics as % of weight		Metals as % of v	Metals as % of weight		Others as % of weight		
Name and CAS number	Weight-%	Name and CAS number	Weight-%	Name and CAS number	Weight-%		
Plastics as % of weight	58,00	Metals as % of weight	10,00	Others as % of weight	10,00		
-	-	-	-	Packaging as % of weight	22,00		

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# Additional Environmental Information

Manufacturing	Manufactured at Ede factory in the Neterhlands, ISO 14001 certified. In the manufacturing process is considered the raw material including the packaging, its transport of the manufacturing site, the manufacturing process and the transport to ABB in Ede. The information is given by the company
Distribution	Packaging consists of a cardboard box, a pallet and LDPE. The transport distance per unequipped Hafonorm cabinet is 150 kilometres, which is based on the default transport distance for the distribution stage from the National Environmental Database (Nationale Milieu Database, hereafter referred to as NMD) Dutch standard Environmental Performance Assessment Method for Construction Works, calculation method to determine environmental performance of construction works throughout their service life, based on EN 15804 (hereafter referred as NMD Assessment method).
Installation	For the installation of the product, no special installation procedure is required an dlittle to no energy is required to install the cabinets.
Use	The product does not require special maintanence operations. The use stage includes energy dissipation which means energy becomes unavailable due to generation of heat in the system.
End of life	No special end-of-life treatment is required. The waste treatment and sisposal scenarios of the materials are based on default waste treatment and disposal scenarios from the Dutch standard NMD Assessment method.
Benefits and loads beyond the system boundaries	Benefits and loads beyond the system boundaries are included



## Environmental impacts

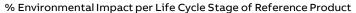
Reference lifetime	20 years
Product category	Electrical, Electronic and HVAC-R Products with specific rules for Electrical switchgear and control gear Solutions (unequipped cabinets and terminal blocks)
Installation elements	Four screws
Use scenario	Load factor: 30% of In and Use rate: 90% of the RLT
Geographical representativeness	Good quality
Technological representativeness	Excellent quality
Software and database used	LCA calculations made with Simapro 9.3, with the EN 15804:2019+A2 characterization factors (IPCC AR5) and Ecoinvent version 3.8n database

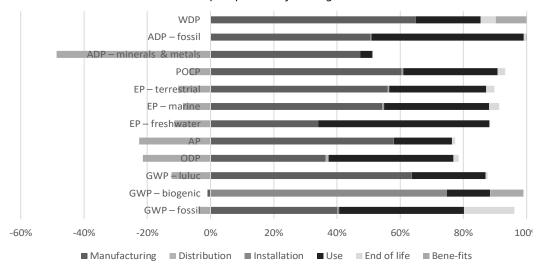
#### **Energy model used**

Manufacturing	Electricity, low voltage {NL}  electricity production, photovoltaic, 3kWp slanted-roof installation, multi-Si, panel, mounted   Cut-off, U and Electricity, low voltage {NL}  market for   Cut-off, U
Installation	Non-applicable
Use	Electricity, low voltage {NL}  market for   Cut-off, U
End of life	Non-applicable

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## Common base of mandatory indicators





#### **Environmental impact indicators**

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
GWP-total	kg CO₂ eq.	8,45E+00	3,39E+00	1,13E-02	3,16E-01	3,39E+00	1,34E+00	-2,81E-01
GWP-fossil	kg CO₂ eq.	8,11E+00	3,39E+00	1,13E-02	3,05E-02	3,34E+00	1,34E+00	-3,20E-01
GWP-biogenic	kg CO₂ eq.	3,34E-01	-3,65E-03	1,15E-05	2,85E-01	5,21E-02	4,32E-04	3,97E-02
GWP-luluc	kg CO₂ eq.	4,61E-03	3,34E-03	4,05E-06	2,61E-06	1,23E-03	3,34E-05	-6,48E-0
GWP-biogenic = Glo	Warming Potential fo bal Warming Potentia Varming Potential lan	l biogenic	d use change					
OPD	kg CFC-11 eq.	3,14E-07	1,46E-07	2,69E-09	1,14E-09	1,58E-07	6,66E-09	-8,57E-08
OPD = Depletion por	tential of the stratosp	heric ozone la	ayer					
AP	H+ eq.	3,10E-02	2,31E-02	4,70E-05	3,70E-05	7,41E-03	3,89E-04	-9,03E-03
AP = Acidification po	otential, Accumulated	Exceedance						
EP-freshwater	kg P eq.	3,15E-04	1,21E-04	7,71E-08	8,10E-08	1,92E-04	8,99E-07	-4,10E-0
EP-marine	kg N eq.	4,43E-03	2,64E-03	1,42E-05	1,34E-05	1,61E-03	1,53E-04	-4,23E-0
EP-terrestrial	mol N eq.	5,53E-02	3,45E-02	1,57E-04	1,43E-04	1,88E-02	1,62E-03	-6,28E-0
	mornica.			•	_,	1,002 02	1,021-03	-0,282-0.
EP-freshwater = Eut EP-marine = Eutropl	rophication potential nication potential, fra ophication potential,	ction of nutri	ents reaching mar		partment	1,002 02	1,022-03	-0,262-03
EP-freshwater = Eut EP-marine = Eutropl	rophication potential	ction of nutri Accumulated	ents reaching mar		partment	4,98E-03	4,16E-04	-1,12E-03
EP-freshwater = Eut EP-marine = Eutropl EP-terrestrial = Eutr POCP	rophication potential nication potential, fra ophication potential,	Accumulated	ents reaching mar Exceedance	ine end compartmen	partment it		,	·
EP-freshwater = Eut EP-marine = Eutropl EP-terrestrial = Eutr  POCP  POCP = Formation p  ADP-minerals &	rophication potential, fra ophication potential, fra ophication potential, kg NMVOC eq.	Accumulated	ents reaching mar Exceedance	ine end compartmen	partment it		,	-1,12E-03
EP-freshwater = Eut EP-marine = Eutropl EP-terrestrial = Eutr POCP POCP = Formation p ADP-minerals & metals	rophication potential nication potential, fra ophication potential, kg NMVOC eq.	ction of nutri Accumulated 1,56E-02 eric ozone	ents reaching mar Exceedance 1,01E-02	ine end compartmen	4,47E-05	4,98E-03	4,16E-04	-1,12E-03 -2,78E-04
EP-freshwater = Eut EP-marine = Eutropl EP-terrestrial = Eutr POCP POCP = Formation p ADP-minerals & metals ADP-fossil ADP-minerals & met	rophication potential fra ophication potential, fra ophication potential, kg NMVOC eq. optential of tropo-sph	ction of nutri- Accumulated  1,56E-02 eric ozone  2,93E-04  9,20E+01 n potential fo	ents reaching mar Exceedance 1,01E-02 2,70E-04 4,67E+01 r non-fossil resour	5,05E-05 2,59E-08 1,76E-01	4,47E-05 3,39E-08	4,98E-03 2,20E-05	4,16E-04 2,71E-07	·
EP-freshwater = Eut EP-marine = Eutropl EP-terrestrial = Eutr  POCP  POCP = Formation p  ADP-minerals & metals  ADP-fossil  ADP-minerals & met ADP-fossil = Abiotic	rophication potential fra ophication potential, fra ophication potential, kg NMVOC eq. openital of tropo-sph kg Sb eq.  MJ als = Abiotic depletion	ction of nutri- Accumulated  1,56E-02 eric ozone  2,93E-04  9,20E+01 n potential fo	ents reaching mar Exceedance 1,01E-02 2,70E-04 4,67E+01 r non-fossil resour	5,05E-05 2,59E-08 1,76E-01	4,47E-05 3,39E-08	4,98E-03 2,20E-05	4,16E-04 2,71E-07	-1,12E-03 -2,78E-04
EP-freshwater = Eut EP-marine = Eutropl EP-terrestrial = Eutr  POCP  POCP = Formation p  ADP-minerals & metals  ADP-fossil  ADP-minerals & met  ADP-fossil = Abiotic  WDP	rophication potential fra ophication potential, fra ophication potential, kg NMVOC eq. optential of tropo-sph kg Sb eq.  MJ als = Abiotic depletion deple-tion for fossil r	tion of nutri- Accumulated  1,56E-02 eric ozone  2,93E-04  9,20E+01 n potential for esources potential statement of the state	ents reaching mar Exceedance  1,01E-02  2,70E-04  4,67E+01 r non-fossil resourential	5,05E-05  2,59E-08  1,76E-01	4,47E-05 3,39E-08 8,47E-02	4,98E-03 2,20E-05 4,45E+01	4,16E-04 2,71E-07 6,02E-01	-1,12E-03 -2,78E-04 1,66E-01
EP-freshwater = Eut EP-marine = Eutropl EP-terrestrial = Eutr POCP POCP = Formation p ADP-minerals & metals ADP-fossil ADP-minerals & met	rophication potential fra ophication potential, fra ophication potential, kg NMVOC eq. optential of tropo-sph kg Sb eq.  MJ als = Abiotic depletion deple-tion for fossil r	action of nutri- Accumulated  1,56E-02 eric ozone  2,93E-04  9,20E+01 n potential for esources potential for esour	ents reaching mar Exceedance  1,01E-02  2,70E-04  4,67E+01 r non-fossil resourential	5,05E-05  2,59E-08  1,76E-01	4,47E-05  3,39E-08 8,47E-02	4,98E-03 2,20E-05 4,45E+01	4,16E-04 2,71E-07 6,02E-01	-1,12E-03 -2,78E-04 1,66E-01

## Common base of mandatory indicators

#### Inventory flows indicator - Resource use indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
PERE	MJ	8,35E+00	2,08E+00	2,24E-03	2,31E-03	6,23E+00	2,81E-02	-3,30E+00
PERM	МЈ	7,09E-01	7,09E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	9,05E+00	2,79E+00	2,24E-03	2,31E-03	6,23E+00	2,81E-02	-3,30E+00
PENRE	МЈ	8,81E+01	3,93E+01	1,87E-01	9,00E-02	4,78E+01	6,45E-01	1,44E-02
PENRM	МЈ	1,10E+01	1,10E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	МЈ	9,91E+01	5,04E+01	1,87E-01	9,00E-02	4,78E+01	6,45E-01	1,44E-02

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials

PERM = Use of renewable primary energy resources used as raw materials

PERT = Total Use of renewable primary energy resources

PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials

PENRM = Use of non-renewable primary energy resources used as raw materials

PENRT = Total Use of non-renewable primary energy re-sources)

## Inventory flows indicator – Indicators describing the use of secondary materials, water, and energy resources

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
SM	kg	2,21E-01	2,21E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	МЈ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	МЈ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m³	5,82E-02	2,97E-02	1,94E-05	2,78E-05	2,56E-02	2,83E-03	2,28E-03

SM = Use of secondary material

RSF = Use of renewable secondary fuels

NRSF = Use of non-renewable secondary fuels

 $FW = Use \ of \ net \ fresh \ water$ 

#### Inventory flows indicator - Waste category indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
Hazardous waste disposed	kg	2,39E-04	1,87E-04	4,25E-07	2,39E-07	5,01E-05	1,54E-06	-1,01E-04
Non- hazardous waste disposed	kg	4,38E-01	2,18E-01	1,64E-02	4,86E-03	1,44E-01	5,51E-02	-3,06E-02
Radioactive waste disposed	kg	1,67E-04	7,03E-05	1,19E-06	5,26E-07	9,22E-05	2,32E-06	-1,77E-05

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## Common base of mandatory indicators

## Inventory flows indicator – Output flow indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
Components for reuse	kg	9,52E-02	0,00E+00	0,00E+00	9,52E-02	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,85E-01	1,78E-06	0,00E+00	6,42E-02	0,00E+00	1,20E-01	0,00E+00
Materials for energy recovery	kg	5,41E-01	0,00E+00	0,00E+00	2,04E-02	0,00E+00	5,20E-01	0,00E+00
Exported energy	МЈ	8,28E+00	0,00E+00	0,00E+00	2,50E-01	0,00E+00	8,03E+00	0,00E+00

#### Inventory flow indicator – other indicators

Indicator	Unit	Total
Biogenic carbon content of the product	kg of C	7,42E-05
Biogenic carbon content of the associated packaging	kg of C	7,78E-02

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## **Optional indicators**

#### **Environmental indicators**

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
Total use of primary energy during the life cycle	MJ	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Emissions of fine particles	inci- dence of dis-eases	3,16E-07	2,83E-07	1,33E-09	7,12E-10	2,74E-08	3,53E-09	8,17E-10
Ionizing radiation, human health	kBq U235 eq.	1,58E-01	6,52E-02	7,62E-04	3,60E-04	8,94E-02	1,81E-03	-1,99E-02
Ecotoxicity (fresh water)	CTUe	1,94E+02	1,50E+02	1,37E-01	1,25E-01	4,02E+01	4,03E+00	-6,34E+01
Human toxicity, car- cinogenic effects	CTUh	4,74E-09	3,66E-09	3,80E-12	6,78E-12	9,43E-10	1,23E-10	-1,71E-09
Human toxicity, non- carcinogenic effects	CTUh	2,22E-07	1,91E-07	1,50E-10	1,57E-10	2,68E-08	4,30E-09	-1,53E-07
Impact related to land use/soil quality	kg	1,72E+01	9,86E+00	2,01E-01	5,71E-02	6,70E+00	3,87E-01	-1,72E+01

STATUS	SECURITY LEVEL	REGISTRATION NUMBER	REV.	LANG.	PAGE	
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Verifier accreditation r	number:	Information and reference documents:		
VH42		www.pep-ecopassport.or	9	
Date of issue:	September 2022	Validity period:	5 years	
Independent verification of the declaration and data, in compliance with ISO 14025: 2010				
Internal O		External		
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 elemprogram		ments from another	PASS PORT.	

Document in compliance with ISO 14025: 2010 "Environmental labels and declarations. Type III environmental declarations"

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## **Environmental Impact Indicator Glossary**

#### Impact indicators

Indicator	Description	Unit
Global warming potential (GWP) - total	Indicator of potential global warming caused by emissions to air contributing to the greenhouse effect. The total global warming potential (GWP-total) is the sum of three sub-categories of climate change.  GWP-total = GWP-fossil + GWP-biogenic + GWP-land use and land use change	kg CO₂ eq.
Ozone depletion (OD)	Emissions to air that contribute to the destruction of the stratospheric ozone layer	kg CFC-11 eq.
Acidification of soil and water (A)	Acidification of soils and water caused by the release of certain gases to the atmosphere, such as nitrogen oxides and sulphur oxides	H+ eq.
Eutrophication (E)	Indicator of the contribution to eutrophication of water by the enrichment of the aquatic ecosystem with nutritional elements, e.g. industrial or domestic effluents, agriculture, etc. This indicator is divided to three: freshwater, marine and terrestrial.	kg P eq., kg N eq., mole N eq.
Photochemical ozone creation (POCP)	Indicator of emissions of gases that affect the creation of photochemical ozone in the lower atmosphere (smog) because of the rays of the sun.	kg NMVOC eq.
Depletion of abiotic resources – elements (ADPe)	Indicator of the depletion of natural non-fossil resources	kg Sb eq.
Depletion of abiotic resources – fossil fuels (ADPf)	The use of non-renewable fossil resources in an unsustainable way (e.g. from material to waste)	MJ (lower heating value)
Water Deprivation potential (WDP)	Deprivation-weighted water consumption. Assesses the potential of water deprivation, to either humans or ecosystems, building on the assumption that the less water remaining available per area, the more likely another user will be deprived.	m³ e depr.

#### **Resource use indicators**

Indicator	Description	Unit
Total use of primary energy	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) + Total use of renewable primary energy re-sources (primary energy and primary energy resources used as raw materials)	MJ (lower heating value)

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