COVERS FOR INSERTS OF RANGE ZONI

PEP ecopassport®

Product Environmental Profile

Registration number:	**ABBG-00734-V01.01-EN**	Drafting rules:	**PCR-ed4-EN-2021 09 06**
Contact information:	**Lide Brito - lide.brito@es.abb.com**	Supplemented by:	**PSR-0005-ed3-EN-2023 06 06**
Verifier accreditation number:	**VH08**	Information and reference documents:	**www.pep-ecopassport.org**
Date of issue:	**January 2025**	Validity period:	**5 years**

Independent verification of the declaration and data in compliance with ISO 14025: 2006

Internal: ☐ **External:** ☒

The PCR review was conducted by a panel og experts chaired by Julie Orgelet (Ddemain)

PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022
The components of the present PEP may not be compared with components from any other program.

Document complies with ISO 14025:2006 "Environmental labels and declarations. Type III environmental declarations"

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.
The contect of this PEP cannot be compared with the content based on another program/database.
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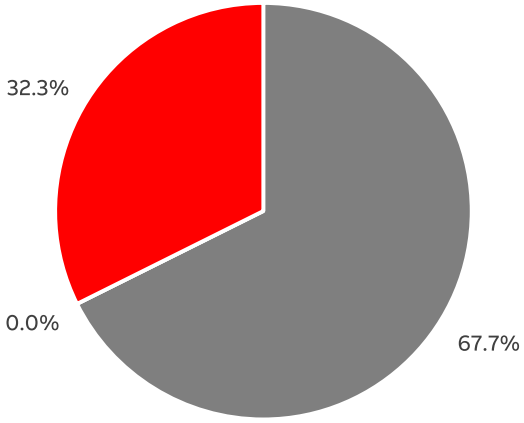
General information

Reference product	2CHT590651A4500 Cover for single switches of white colour The content of this PEP cannot be compare with content from another program.
Description of the product	Zoni-Range covers are protective covers for several inserts, such as switches, blank plates, data sockets, TV connections, LED lights, vacuum cleaners, etc. These covers are composed of two plastic plates, whose shapes depend on the element to be protected. For each design, there are colour variations.
Functional unit	Cover for protecting inserts with IP40 safety system and a reference lifetime of 20 years. Dimensions: 58,5 x 58.5 x 25.5 mm.
Other products covered	List of other products covered or references are included from page 8 to page 15
Manufacturing address	ABB sro Elektro-Praga (Vyskočilova 1561/4A Praha 4 - Michle, 140 00 Czech) www.new.abb.com

Constituent Materials



Total weight of reference product and packaging	**25.9**	**g**

Plastics as % of weight		**Metals as % of weight**		**Others as % of weight**	
Name and CAS number	Weight%	Name and CAS number	Weight%	Name and CAS number	Weight%
Polycarbonate	45.0			**Cardboard packaging**	17.4
Polyamide	22.7			**Glass fibres**	9.7
				Polyethylene packaging	5.3

The reference product and other products in this range are in conformity with the provisions of Low Voltage Directive 2014/35/EU, RoHS directive 2011/65/EU, covering 2015/863(EU), REACH regulation No 1907/2006, and national legislation. Plastics used for the reference product are halogen-free materials (IEC/61249-2-21) and they are also recyclable.

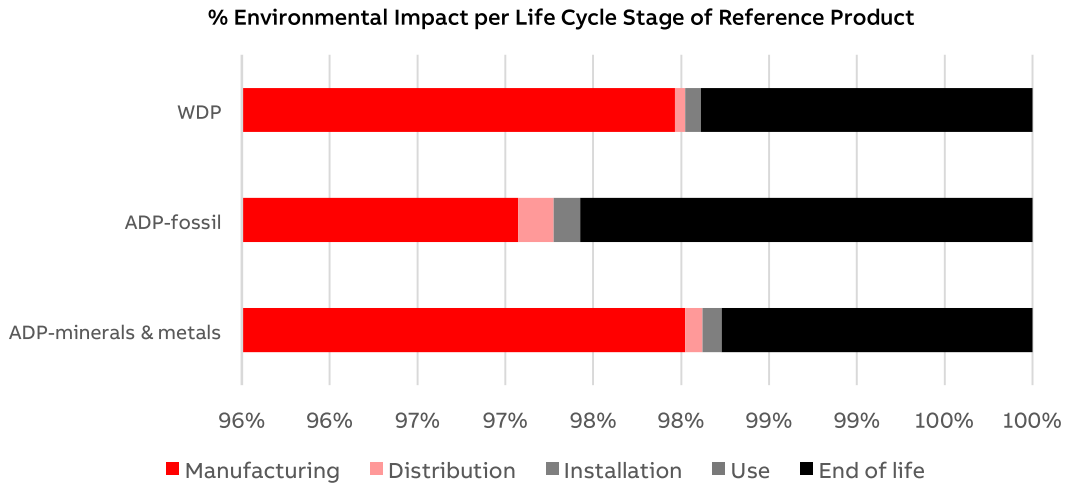
Additional Information

Manufacturing	Includes the environmental impacts associated with the extraction and processing of the raw materials making up the product and its packaging, as well as their transport to the manufacturing site. Additionally, its includes the electricity consumption required for the product assembly and the wastes generated during the manufacturing process.
Distribution	Includes the transportation in its packaging from the manufacturer's last logistics platform to the customer.
Installation	Installation stage includes the manual installation of the products by the customer (no energy consumption is required during installation) and the disposal of the packaging.
Use	Includes the energy consumption due to electrial lossed during the RLT in the customer´s locations. Due to the nature of the product, no energy is consumed during the RLT.
End of life	Includes the transportation of the product from the installation site to the final end of life treatment site, as well as the end of life treatment processes. A value of 1,000 km transport by lorry is used for the transportation.
Benefits and loads beyond the system boundaries	Potential for reuse, recovery and/or recycling, expressed as net benefits and impacts

Environmental Impacts

Reference lifetime	20 years
Product category	Other equipments
Installation elements	Manual installation by the customer.
Use scenario	Non-applicable.
Geographical representativeness	Global.
Technological representativeness	Materials and processes data are representative of the production of 2CHT590651A4500 and other products of the homogeneous environmental Zoni-range covers for inserts.
Software and database used	SimaPro 9.6.0.1 & Ecoinvent 3.10
Energy model used	
Manufacturing	Electricity mix of Czech Republic.
Installation	No energy required.
Use	Non-applicable.
End of life	Recycling of product

Common base of mandatory indicators



Environmental impact indicators

Indicator		Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
GWP	Total	kg CO2 eq.	3.03E-01	2.79E-01	6.73E-04	9.47E-03	0.00E+00	1.45E-02	-1.28E-01
	Fossil	kg CO2 eq.	3.02E-01	2.85E-01	6.72E-04	1.84E-03	0.00E+00	1.45E-02	-1.27E-01
	Biogenic	kg CO2 eq.	1.61E-03	-6.02E-03	1.20E-07	7.63E-03	0.00E+00	3.74E-06	-1.90E-04
	Luluc	kg CO2 eq.	2.28E-04	2.22E-04	2.20E-07	2.51E-07	0.00E+00	4.91E-06	-7.13E-05
ODP		kg CFC-11 eq.	4.49E-09	4.32E-09	1.34E-11	8.83E-12	0.00E+00	1.54E-10	-1.76E-09
AP		H+ eq.	1.04E-03	1.01E-03	2.10E-06	2.56E-06	0.00E+00	2.98E-05	-4.97E-04
EP	Freshwater	kg P eq.	1.80E-05	1.79E-05	5.17E-09	8.09E-09	0.00E+00	1.39E-07	-2.98E-06
	Marine	kg N eq.	2.06E-04	1.94E-04	7.01E-07	1.38E-06	0.00E+00	9.51E-06	-1.04E-04
	Terrestrial	mol N eq.	2.18E-03	2.06E-03	7.71E-06	9.95E-06	0.00E+00	1.02E-04	-1.06E-03
POPCD		kg NMVOC eq.	8.69E-04	8.20E-04	3.29E-06	3.83E-06	0.00E+00	4.16E-05	-4.56E-04
ADP	Minerals & metals	kg SB eq.	2.20E-06	2.15E-06	2.15E-09	2.40E-09	0.00E+00	3.89E-08	-1.02E-06
	Fossil	MJ	4.66E+00	4.52E+00	9.44E-03	7.09E-03	0.00E+00	1.20E-01	-2.08E+00
WDP		m³ eq. depr.	6.67E-02	6.53E-02	3.87E-05	5.91E-05	0.00E+00	1.26E-03	-3.51E-02

Resource use indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
PERE	MJ	1.57E-01	1.52E-01	1.55E-04	2.82E-04	0.00E+00	4.33E-03	-8.71E-02
PERM	MJ	7.25E-02	7.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.30E-01	2.25E-01	1.55E-04	2.82E-04	0.00E+00	4.33E-03	-8.71E-02
PENRE	MJ	4.09E+00	3.95E+00	9.44E-03	7.09E-03	0.00E+00	1.20E-01	-2.08E+00
PENRM	MJ	5.74E-01	5.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	4.66E+00	4.52E+00	9.44E-03	7.09E-03	0.00E+00	1.20E-01	-2.08E+00

Common base of mandatory indicators

Use of secondary materials, water, and energy resources

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	2.18E-03	2.15E-03	1.29E-06	4.54E-07	0.00E+00	3.20E-05	-9.34E-04

Waste category indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
HWD	kg	3.05E-05	2.93E-05	6.36E-08	6.09E-08	0.00E+00	1.08E-06	-1.83E-05
N-HWD	kg	2.37E-02	1.47E-02	4.48E-04	1.00E-03	0.00E+00	7.56E-03	-4.51E-03
RWD	kg	1.05E-05	1.05E-05	3.01E-09	5.48E-09	0.00E+00	7.73E-08	-1.40E-06

Output flow indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
CfRu	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MfR	kg	2.32E-02	2.60E-03	0.00E+00	4.25E-03	0.00E+00	1.64E-02	0.00E+00
MfER	kg	1.36E-02	1.10E-02	0.00E+00	9.08E-04	0.00E+00	1.62E-03	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Other indicators

Indicator		Unit	Total
Biogenic Carbon	Product	kg of C	0.00E+00
	Packaging	kg of C	1.91E-03

Extrapolation Factors

For other products than the Reference product covered by this PEP, the environmental impacts for each phase of the lifecycle are obtained by multiplying the values of the Reference product by the following coefficients:

* if the coefficient is !1, the impacts of the phase of the life cycle are assimilated to the Reference product, meaning that the impacts are unchanged in comparison to the Reference product

Product name	Manufacturing	Distribution	Installation	Use	End of life	Benefits
2CHT590651A4500	1.00	1.00	1.00	1.00	1.00	1.00
2CHT590653A4500	1.06	1.06	0.75	1.00	1.12	1.06
2CHT590610A4500	1.01	1.01	0.93	1.00	1.02	1.01
2CHT590655A4500	0.99	0.99	0.95	1.00	1.00	0.99
2CHT590933A4500	0.98	0.98	0.88	1.00	1.00	0.98
2CHT590652A4500	1.03	1.03	1.20	1.00	1.00	1.03
2CHT590666A4500	1.00	1.00	0.88	1.00	1.02	1.00
2CHT590700A4500	1.09	1.09	1.15	1.00	1.08	1.09
2CHT080300A4500	0.67	0.67	1.38	1.00	0.53	0.67
2CHT290040A4500	0.58	0.58	1.10	1.00	0.49	0.58
2CHT290418A4500	1.45	1.45	2.25	1.00	1.30	1.45
2CHT910300A4500	0.76	0.76	1.08	1.00	0.70	0.76
2CHT704010A4500	0.63	0.63	1.10	1.00	0.54	0.63
2CHT940123A4500	0.75	0.75	1.23	1.00	0.66	0.75
2CHT590662A4500	1.02	1.02	0.90	1.00	1.05	1.02
2CHT621000A4500	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621002A4500	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621003A4500	0.67	0.67	1.00	1.00	0.61	0.67
2CHT622000A4500	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622002A4500	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622103A4500	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622203A4500	0.44	0.44	0.95	1.00	0.34	0.44
2CHT623000A4500	0.76	0.76	1.00	1.00	0.71	0.76
2CHT704020A4500	0.64	0.64	1.03	1.00	0.56	0.64
2CHT660075A4500	0.69	0.69	1.00	1.00	0.63	0.69
2CHT160070A4500	0.55	0.55	1.13	1.00	0.44	0.55
2CHT480034A4500	1.37	1.37	2.23	1.00	1.21	1.37
2CHT050001A4500	1.06	1.06	1.25	1.00	1.02	1.06
2CHT506717A4500	4.33	4.33	3.80	1.00	4.43	4.33
2CHT590651A4240	1.00	1.00	1.00	1.00	1.00	1.00
2CHT590653A4240	1.06	1.06	0.75	1.00	1.12	1.06
2CHT590610A4240	1.01	1.01	0.93	1.00	1.02	1.01
2CHT590655A4240	0.99	0.99	0.95	1.00	1.00	0.99
2CHT590933A4240	0.98	0.98	0.88	1.00	1.00	0.98
2CHT590652A4240	1.03	1.03	1.20	1.00	1.00	1.03
2CHT590666A4240	1.00	1.00	0.88	1.00	1.02	1.00
2CHT590700A4240	1.09	1.09	1.15	1.00	1.08	1.09

Extrapolation Factors

Product name	Manufacturing	Distribution	Installation	Use	End of life	Benefits
2CHT080300A4240	0.67	0.67	1.38	1.00	0.53	0.67
2CHT290040A4240	0.58	0.58	1.10	1.00	0.49	0.58
2CHT290418A4240	1.45	1.45	2.25	1.00	1.30	1.45
2CHT910300A4240	0.76	0.76	1.08	1.00	0.70	0.76
2CHT704010A4240	0.63	0.63	1.10	1.00	0.54	0.63
2CHT940123A4240	0.75	0.75	1.23	1.00	0.66	0.75
2CHT590662A4240	1.02	1.02	0.90	1.00	1.05	1.02
2CHT621000A4240	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621002A4240	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621003A4240	0.67	0.67	1.00	1.00	0.61	0.67
2CHT622000A4240	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622002A4240	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622103A4240	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622203A4240	0.44	0.44	0.95	1.00	0.34	0.44
2CHT623000A4240	0.76	0.76	1.00	1.00	0.71	0.76
2CHT704020A4240	0.64	0.64	1.03	1.00	0.56	0.64
2CHT660075A4240	0.69	0.69	1.00	1.00	0.63	0.69
2CHT160070A4240	0.55	0.55	1.13	1.00	0.44	0.55
2CHT480034A4240	1.37	1.37	2.23	1.00	1.21	1.37
2CHT050001A4240	1.06	1.06	1.25	1.00	1.02	1.06
2CHT506717A4240	4.33	4.33	3.80	1.00	4.43	4.33
2CHT590651A4241	1.00	1.00	1.00	1.00	1.00	1.00
2CHT590653A4241	1.06	1.06	0.75	1.00	1.12	1.06
2CHT590610A4241	1.01	1.01	0.93	1.00	1.02	1.01
2CHT590655A4241	0.99	0.99	0.95	1.00	1.00	0.99
2CHT590933A4241	0.98	0.98	0.88	1.00	1.00	0.98
2CHT590652A4241	1.03	1.03	1.20	1.00	1.00	1.03
2CHT590666A4241	1.00	1.00	0.88	1.00	1.02	1.00
2CHT590700A4241	1.09	1.09	1.15	1.00	1.08	1.09
2CHT080300A4241	0.67	0.67	1.38	1.00	0.53	0.67
2CHT290040A4241	0.58	0.58	1.10	1.00	0.49	0.58
2CHT290418A4241	1.45	1.45	2.25	1.00	1.30	1.45
2CHT910300A4241	0.76	0.76	1.08	1.00	0.70	0.76
2CHT704010A4241	0.63	0.63	1.10	1.00	0.54	0.63
2CHT940123A4241	0.75	0.75	1.23	1.00	0.66	0.75
2CHT590662A4241	1.02	1.02	0.90	1.00	1.05	1.02
2CHT621000A4241	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621002A4241	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621003A4241	0.67	0.67	1.00	1.00	0.61	0.67
2CHT622000A4241	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622002A4241	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622103A4241	0.44	0.44	0.95	1.00	0.34	0.44

Extrapolation Factors

Product name	Manufacturing	Distribution	Installation	Use	End of life	Benefits
2CHT622203A4241	0.44	0.44	0.95	1.00	0.34	0.44
2CHT623000A4241	0.76	0.76	1.00	1.00	0.71	0.76
2CHT704020A4241	0.64	0.64	1.03	1.00	0.56	0.64
2CHT660075A4241	0.69	0.69	1.00	1.00	0.63	0.69
2CHT160070A4241	0.55	0.55	1.13	1.00	0.44	0.55
2CHT480034A4241	1.37	1.37	2.23	1.00	1.21	1.37
2CHT050001A4241	1.06	1.06	1.25	1.00	1.02	1.06
2CHT506717A4241	4.33	4.33	3.80	1.00	4.43	4.33
2CHT590651A4242	1.00	1.00	1.00	1.00	1.00	1.00
2CHT590653A4242	1.06	1.06	0.75	1.00	1.12	1.06
2CHT590610A4242	1.01	1.01	0.93	1.00	1.02	1.01
2CHT590655A4242	0.99	0.99	0.95	1.00	1.00	0.99
2CHT590933A4242	0.98	0.98	0.88	1.00	1.00	0.98
2CHT590652A4242	1.03	1.03	1.20	1.00	1.00	1.03
2CHT590666A4242	1.00	1.00	0.88	1.00	1.02	1.00
2CHT590700A4242	1.09	1.09	1.15	1.00	1.08	1.09
2CHT080300A4242	0.67	0.67	1.38	1.00	0.53	0.67
2CHT290040A4242	0.58	0.58	1.10	1.00	0.49	0.58
2CHT290418A4242	1.45	1.45	2.25	1.00	1.30	1.45
2CHT910300A4242	0.76	0.76	1.08	1.00	0.70	0.76
2CHT704010A4242	0.63	0.63	1.10	1.00	0.54	0.63
2CHT940123A4242	0.75	0.75	1.23	1.00	0.66	0.75
2CHT590662A4242	1.02	1.02	0.90	1.00	1.05	1.02
2CHT621000A4242	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621002A4242	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621003A4242	0.67	0.67	1.00	1.00	0.61	0.67
2CHT622000A4242	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622002A4242	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622103A4242	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622203A4242	0.44	0.44	0.95	1.00	0.34	0.44
2CHT623000A4242	0.76	0.76	1.00	1.00	0.71	0.76
2CHT704020A4242	0.64	0.64	1.03	1.00	0.56	0.64
2CHT660075A4242	0.69	0.69	1.00	1.00	0.63	0.69
2CHT160070A4242	0.55	0.55	1.13	1.00	0.44	0.55
2CHT480034A4242	1.37	1.37	2.23	1.00	1.21	1.37
2CHT050001A4242	1.06	1.06	1.25	1.00	1.02	1.06
2CHT506717A4242	4.33	4.33	3.80	1.00	4.43	4.33
2CHT590651A4243	1.00	1.00	1.00	1.00	1.00	1.00
2CHT590653A4243	1.06	1.06	0.75	1.00	1.12	1.06
2CHT590610A4243	1.01	1.01	0.93	1.00	1.02	1.01
2CHT590655A4243	0.99	0.99	0.95	1.00	1.00	0.99
2CHT590933A4243	0.98	0.98	0.88	1.00	1.00	0.98

Extrapolation Factors

Product name	Manufacturing	Distribution	Installation	Use	End of life	Benefits
2CHT590652A4243	1.03	1.03	1.20	1.00	1.00	1.03
2CHT590666A4243	1.00	1.00	0.88	1.00	1.02	1.00
2CHT590700A4243	1.09	1.09	1.15	1.00	1.08	1.09
2CHT080300A4243	0.67	0.67	1.38	1.00	0.53	0.67
2CHT290040A4243	0.58	0.58	1.10	1.00	0.49	0.58
2CHT290418A4243	1.45	1.45	2.25	1.00	1.30	1.45
2CHT910300A4243	0.76	0.76	1.08	1.00	0.70	0.76
2CHT704010A4243	0.63	0.63	1.10	1.00	0.54	0.63
2CHT940123A4243	0.75	0.75	1.23	1.00	0.66	0.75
2CHT590662A4243	1.02	1.02	0.90	1.00	1.05	1.02
2CHT621000A4243	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621002A4243	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621003A4243	0.67	0.67	1.00	1.00	0.61	0.67
2CHT622000A4243	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622002A4243	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622103A4243	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622203A4243	0.44	0.44	0.95	1.00	0.34	0.44
2CHT623000A4243	0.76	0.76	1.00	1.00	0.71	0.76
2CHT704020A4243	0.64	0.64	1.03	1.00	0.56	0.64
2CHT660075A4243	0.69	0.69	1.00	1.00	0.63	0.69
2CHT160070A4243	0.55	0.55	1.13	1.00	0.44	0.55
2CHT480034A4243	1.37	1.37	2.23	1.00	1.21	1.37
2CHT050001A4243	1.06	1.06	1.25	1.00	1.02	1.06
2CHT506717A4243	4.33	4.33	3.80	1.00	4.43	4.33
2CHT590651A4244	1.00	1.00	1.00	1.00	1.00	1.00
2CHT590653A4244	1.06	1.06	0.75	1.00	1.12	1.06
2CHT590610A4244	1.01	1.01	0.93	1.00	1.02	1.01
2CHT590655A4244	0.99	0.99	0.95	1.00	1.00	0.99
2CHT590933A4244	0.98	0.98	0.88	1.00	1.00	0.98
2CHT590652A4244	1.03	1.03	1.20	1.00	1.00	1.03
2CHT590666A4244	1.00	1.00	0.88	1.00	1.02	1.00
2CHT590700A4244	1.09	1.09	1.15	1.00	1.08	1.09
2CHT080300A4244	0.67	0.67	1.38	1.00	0.53	0.67
2CHT290040A4244	0.58	0.58	1.10	1.00	0.49	0.58
2CHT290418A4244	1.45	1.45	2.25	1.00	1.30	1.45
2CHT910300A4244	0.76	0.76	1.08	1.00	0.70	0.76
2CHT704010A4244	0.63	0.63	1.10	1.00	0.54	0.63
2CHT940123A4244	0.75	0.75	1.23	1.00	0.66	0.75
2CHT590662A4244	1.02	1.02	0.90	1.00	1.05	1.02
2CHT621000A4244	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621002A4244	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621003A4244	0.67	0.67	1.00	1.00	0.61	0.67

Extrapolation Factors

Product name	Manufacturing	Distribution	Installation	Use	End of life	Benefits
2CHT622000A4244	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622002A4244	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622103A4244	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622203A4244	0.44	0.44	0.95	1.00	0.34	0.44
2CHT623000A4244	0.76	0.76	1.00	1.00	0.71	0.76
2CHT704020A4244	0.64	0.64	1.03	1.00	0.56	0.64
2CHT660075A4244	0.69	0.69	1.00	1.00	0.63	0.69
2CHT160070A4244	0.55	0.55	1.13	1.00	0.44	0.55
2CHT480034A4244	1.37	1.37	2.23	1.00	1.21	1.37
2CHT050001A4244	1.06	1.06	1.25	1.00	1.02	1.06
2CHT506717A4244	4.33	4.33	3.80	1.00	4.43	4.33
2CHT590651A4237	1.00	1.00	1.00	1.00	1.00	1.00
2CHT590653A4237	1.06	1.06	0.75	1.00	1.12	1.06
2CHT590610A4237	1.01	1.01	0.93	1.00	1.02	1.01
2CHT590655A4237	0.99	0.99	0.95	1.00	1.00	0.99
2CHT590933A4237	0.98	0.98	0.88	1.00	1.00	0.98
2CHT590652A4237	1.03	1.03	1.20	1.00	1.00	1.03
2CHT590666A4237	1.00	1.00	0.88	1.00	1.02	1.00
2CHT590700A4237	1.09	1.09	1.15	1.00	1.08	1.09
2CHT080300A4237	0.67	0.67	1.38	1.00	0.53	0.67
2CHT290040A4237	0.58	0.58	1.10	1.00	0.49	0.58
2CHT290418A4237	1.45	1.45	2.25	1.00	1.30	1.45
2CHT910300A4237	0.76	0.76	1.08	1.00	0.70	0.76
2CHT704010A4237	0.63	0.63	1.10	1.00	0.54	0.63
2CHT940123A4237	0.75	0.75	1.23	1.00	0.66	0.75
2CHT590662A4237	1.02	1.02	0.90	1.00	1.05	1.02
2CHT621000A4237	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621002A4237	0.67	0.67	1.00	1.00	0.61	0.67
2CHT621003A4237	0.67	0.67	1.00	1.00	0.61	0.67
2CHT622000A4237	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622002A4237	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622103A4237	0.44	0.44	0.95	1.00	0.34	0.44
2CHT622203A4237	0.44	0.44	0.95	1.00	0.34	0.44
2CHT623000A4237	0.76	0.76	1.00	1.00	0.71	0.76
2CHT704020A4237	0.64	0.64	1.03	1.00	0.56	0.64
2CHT660075A4237	0.69	0.69	1.00	1.00	0.63	0.69
2CHT160070A4237	0.55	0.55	1.13	1.00	0.44	0.55
2CHT480034A4237	1.37	1.37	2.23	1.00	1.21	1.37
2CHT050001A4237	1.06	1.06	1.25	1.00	1.02	1.06
2CHT506717A4237	4.33	4.33	3.80	1.00	4.43	4.33

Glossary

Environmental impact Indicators	
GWP-total	Global Warming Potential total (Climate hange)
GWP-fossil	Global Warming Potential fossil
GWP-biogenic	Global Warming Potential biogenic
GWP-luluc	Global Warming Potential land use and land use change
ODP	Depletion potential of the stratospheric ozone layer
AP	Acidification potential
EP-freshwater	Eutrophication potential - freshwater compartment
EP-marine	Eutrophication potential - fraction of nutrients reachin marine end compartment
EP-terrestrial	Eutrophication potential - Accumulated Exceedance
POCP	Formation potential of tropospheric ozone
ADP-m&m	Abiotic Depletion for non-fossil resources potential
ADP-fossil	Abiotic Depletion for fossil resources potential, WDP
WDP	Water deprivation potential

Resource indicators	
PENRE	Use of non-renewable primary energy excluding renewable primary energy resources used as raw material
PENRM	Use of non-renewable primary energy resources used as raw material
PENRT	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials
PERE	Use of renewable primary energy excluding non-renewable primary energy resources used as raw material.
PERM	Use of renewable primary energy resources used as raw material
PERT	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)

Secondary materials, water and energy resources	
SM	Use of secundary materials
RSF	Use of renewable secondary fuels
NRSF	Use of non-renewable secondary fuels
FW	Net use of fresh water

Waste category indicators	
HWD	Hazardous waste disposed
N-HWD	Non-hazardous waste disposed
RWD	Radioactive waste disposed

Output flow indicators	
CfRu	Components for re-use
MfR	Materials for recycling
MfER	Materials for energy recovery
EE	Exported Energy

Optional indicators	
Tot PE	Total use of primary energy during the life cycle
Efp	Emissions of Fine particles
IrHH	Ionizing radiation, human health
ETX FW	Ecotoxicity, freshwater
HTX CE	Human toxicity, carcinogenic effects
HTX N-CE	Human toxicity, non-carcinogenic effects
IrLS	Impact related to Land use / soil quality

References

[1] PCR “PEP-PCR-ed4-EN-2022_09_06” - Product Category Rules for Electrical, Electronic and HVAC-R Products (published: 6th September 2022)

[2] PSR “PSR-0005-ed2-EN-2016 03 29” - SPECIFIC RULES FOR Electrical switchgear and control gear Solutions (Circuit breakers)

[3] EN 50693:2019 - Product category rules for life cycle assessments of electronic and electrical products and systems

[4] ISO 14040:2006 - Environmental management -Life cycle assessment - Principles and framework

[5] ISO 14044:2006 - Environmental management - Life cycle assessment - Requirements and guidelines

[6] ecoinvent v3.8 (2022). ecoinvent database version 3.8 - (https://ecoinvent.org/)

[7] SimaPro Software version 9.3.0.3 - PRé Sustainability

[8] UNI EN 15804:2012+A2:2019: Sustainability of constructions - Environmental product declarations (September 2019)

[9] IEC/TR 62635 - Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment - Edition 1.0 2012-10

[10] https://www.ecosystemspa.com/

[11] LB-DT 17-21D - RoHS II (MCCBs and ACBs)

[12] LB-DT 18-21D - REACH (MCCBs and ACBs)

[13] 1SDL000571R0 Ver 01 - RoHS Exemptions (MCCBs and ACBs)

[14] 1SDL000572R0 Ver 01 - SVHC present in excess of 0.1% (MCCBs and ACBs)