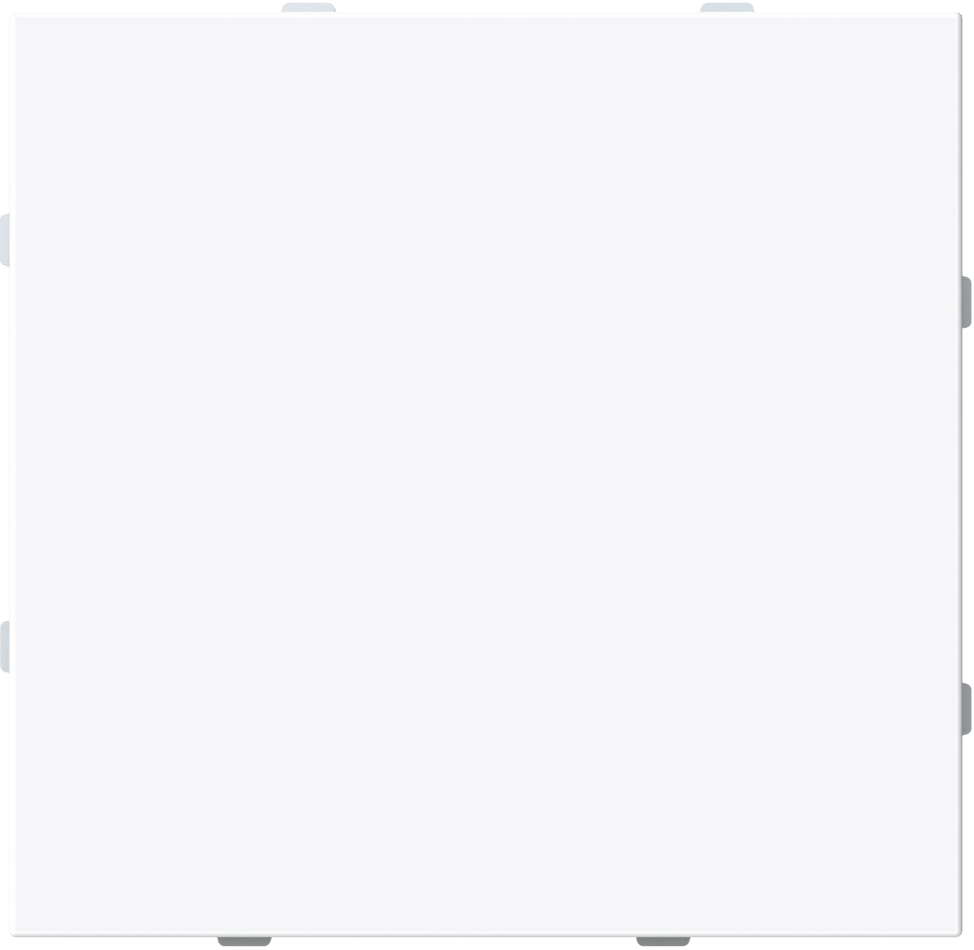
Vega Cover plates

PEP ecopassport®

Product Environmental Profile



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Contact information:	**Lide Brito Amas - lide.brito@es.abb.com**	Supplemented by:	**PSR-0005-ed3.1-EN-2023 12 08**
Verifier accreditation number:	**VH08**	Information and reference documents:	**www.pep-ecopassport.org**
Date of issue:	**August-25**	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 of 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"

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ABB Purpose & Embedding Sustainability

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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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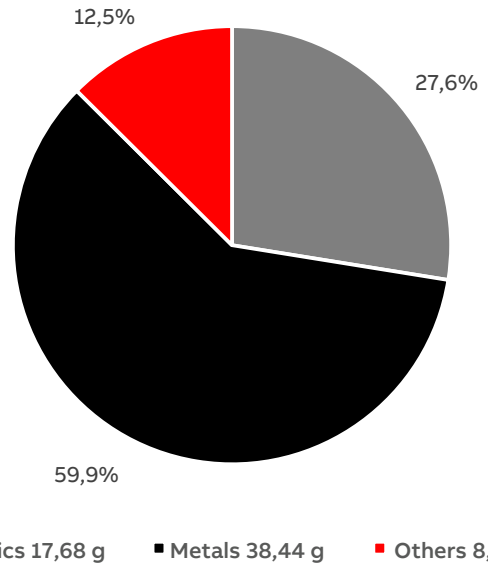
General information

Reference product	2CLA880000A1101 8800 BL, Blank cover plate, White glossy
Description of the product	The family of products “Vega Cover plates” is composed of aesthetic cover plates which protect people from direct contact with various outlets. They are designed for an indoor application and have an embedded mounting clamp for installation.
Functional unit	Protecting the user from direct contact with live parts. The product achieves performance levels defined by IEC 60529 (IP20 protection) and IEC 62262 (IK0 resistance) standards over a reference service life of 20 years.
Other products covered	Other products belonging to the VEGA Cover plates family. All products covered by this PEP are listed in tables on pages 8 and 9.
Manufacturing address	Aranguren Pol., 6, Arragua, 20180 Oiartzun, Gipuzkoa, Spain https://new.abb.com/products/2CLA880000A1101

Constituent Materials



Total weight of reference product	64,169 g - including the product and its packaging 55,360 g - for the reference product only

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 (94% recycled)	25,4	**Galvanized steel**	59,0	**Carton (92% recycled)**	12,5
PP foil (30% recycled)	1,2	**Stainless steel**	0,9		
Polyamide 6.6	1,0				

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Additional Information

Manufacturing	Manufactured by ABB Niessen at the Oiartzun factory, ISO 14001 certified. 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, it includes the electricity consumption required for the produced items manufacturing and the wastes generated during the manufacturing process, theirs transport to waste treatment company and recycling process.
Distribution	Includes the transportation in its packaging from the manufacturer's last logistic platform to an average delivery point in the sales area.
Installation	Includes the manual installation of the products by customers (no energy consumption is required during installation) and the end-of-life of the packaging.
Use	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 scenario. The end-of-life treatment scenario is modeled according to Eurostat data for WEEE by waste management operations for year 2022, for all product distribution regions.
Benefits and loads beyond the system boundaries	The Module D formula from the PCR-ed4-EN-2021 09 06 was used to calculate the benefits and loads beyond the system boundaries.

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Environmental Impacts

Reference lifetime	20 years
Product category	Other equipments - passive product
Installation elements	Manual installation by the customer using embedded clamping mounts. No additional elements needed during installation.
Use scenario	Non-applicable
Geographical representativeness	Manufacturing: Spain Distribution, Installation and End-of-life: Spain, Portugal, Rest of Europe
Technological representativeness	Materials and processes data are representative of the production of 2CLA880000A1101 and other products of its homogeneous environmental VEGA Cover plates family of the year 2024.
Software and database used	SimaPro 9.6.0.1, Ecoinvent 3.10, Industry Data 2.0

Energy model used	
Manufacturing	ABB Niessen energy mix in 2024 specific for the factory in Oiartzun: 7.71% - local self-generated electricity from solar PV 35.51% - thermosolar energy from electricity grid (confirmed by certificate of origin) 56.78% - hydropower from electricity grid (confirmed by certificate of origin)
Installation	No energy required
Use	Non-applicable
End of life	The energy-related processes used for the inputs of the end-of-life stage are those included in the ecoinvent datasets selected for the analysis.

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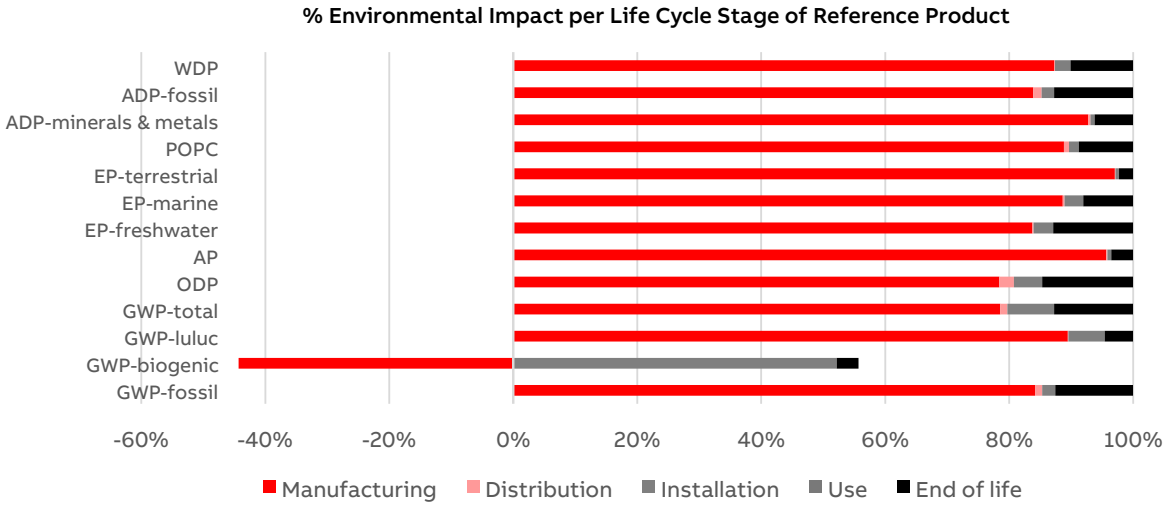
Common base of mandatory indicators



Environmental impact indicators

Indicator		Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
GWP	Total	kg CO2 eq.	2,54E-01	1,99E-01	2,96E-03	1,91E-02	0,00E+00	3,24E-02	-8,11E-02
	Fossil	kg CO2 eq.	2,50E-01	2,10E-01	2,96E-03	5,18E-03	0,00E+00	3,15E-02	-7,97E-02
	Biogenic	kg CO2 eq.	3,02E-03	-1,18E-02	4,97E-07	1,39E-02	0,00E+00	9,30E-04	-1,38E-03
	Luluc	kg CO2 eq.	6,68E-04	5,97E-04	6,77E-07	3,91E-05	0,00E+00	3,05E-05	-2,44E-05
ODP		kg CFC-11 eq.	2,59E-09	2,03E-09	6,03E-11	1,19E-10	0,00E+00	3,79E-10	-3,66E-10
AP		H+ eq.	2,86E-03	2,74E-03	4,91E-06	1,76E-05	0,00E+00	1,01E-04	-3,22E-04
EP	Freshwater	kg P eq.	8,35E-05	7,00E-05	1,43E-07	2,66E-06	0,00E+00	1,08E-05	-3,64E-05
	Marine	kg N eq.	3,40E-04	3,02E-04	1,03E-06	1,03E-05	0,00E+00	2,74E-05	-7,08E-05
	Terrestrial	mol N eq.	1,03E-02	1,00E-02	1,11E-05	6,14E-05	0,00E+00	2,34E-04	-7,60E-04
POCP		kg NMVOC eq.	9,85E-04	8,75E-04	8,36E-06	1,56E-05	0,00E+00	8,61E-05	-2,58E-04
ADP	Minerals & metals	kg SB eq.	2,44E-06	2,26E-06	8,75E-09	1,64E-08	0,00E+00	1,51E-07	-6,12E-07
	Fossil	MJ	2,97E+00	2,49E+00	4,07E-02	6,01E-02	0,00E+00	3,79E-01	-7,56E-01
WDP		m³ eq. depr.	9,31E-02	8,12E-02	1,15E-04	2,30E-03	0,00E+00	9,42E-03	-1,18E-02

Resource use indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
PERE	MJ	4,59E-01	3,98E-01	4,09E-04	1,05E-02	0,00E+00	5,06E-02	-5,32E-02
PERM	MJ	6,30E-02	6,30E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,41E-02
PERT	MJ	5,22E-01	4,61E-01	4,09E-04	1,05E-02	0,00E+00	5,06E-02	-3,91E-02
PENRE	MJ	2,97E+00	2,49E+00	4,07E-02	6,01E-02	0,00E+00	3,79E-01	-7,56E-01
PENRM	MJ	8,76E-02	8,76E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,02E-02
PENRT	MJ	3,06E+00	2,58E+00	4,07E-02	6,01E-02	0,00E+00	3,79E-01	-7,16E-01

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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	2,41E-02	2,41E-02	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	2,44E-03	2,02E-03	3,76E-06	7,84E-05	0,00E+00	3,33E-04	-3,97E-04

Waste category indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
HWD	kg	6,51E-02	5,39E-02	3,33E-05	2,06E-04	0,00E+00	1,10E-02	-2,73E-02
N-HWD	kg	2,00E-01	1,57E-01	3,83E-04	7,91E-03	0,00E+00	3,47E-02	-5,30E-02
RWD	kg	4,02E-06	2,55E-06	7,67E-09	9,70E-08	0,00E+00	1,36E-06	-7,74E-07

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	6,60E-02	1,38E-02	0,00E+00	6,91E-03	0,00E+00	4,53E-02	0,00E+00
MfER	kg	7,93E-03	1,29E-03	0,00E+00	1,01E-03	0,00E+00	5,63E-03	-4,18E-06
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	3,35E-03

Optional indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
Tot PE	MJ	3,58E+00	3,04E+00	4,12E-02	7,05E-02	0,00E+00	4,29E-01	-7,55E-01
Efp	Dise inc	3,48E-08	3,21E-08	2,32E-10	1,57E-10	0,00E+00	2,31E-09	-5,97E-09
IrHH	kBq U-235 eq	1,61E-02	1,03E-02	3,08E-05	3,80E-04	0,00E+00	5,29E-03	-3,20E-03
ETX FW	CTUe	6,24E+00	5,99E+00	8,42E-03	8,58E-02	0,00E+00	1,61E-01	-5,05E+00
HTX CE	CTUh	1,73E-08	1,70E-08	1,77E-11	1,46E-11	0,00E+00	2,68E-10	-1,91E-08
HTX N-CE	CTUh	2,42E-09	1,91E-09	3,07E-11	8,48E-11	0,00E+00	3,98E-10	-7,04E-10
IrLS	Pt	1,36E+00	1,17E+00	3,22E-03	4,35E-02	0,00E+00	1,40E-01	-1,41E-01

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Products covered

The PEP includes a group of similar products which all belong to the same product family. There are different variations of the products, which are split into 20 different product groups. The environmental impact of all products within one product variant group is the same. The complete list of products covered by this PEP is shown in the tables below.

General characteristics of all products covered by the EPD - part I

Variants group	Product code	Commercial reference	Material	Description
1	2CLA880000A1101 (reference product) 2CLA880000A1001	8800 BL (reference product) 8800 BT	Recycled PC (94% recycled content)	Blank cover plate Color: White glossy, White matt
2	2CLA880000A1501 2CLA880000A1601 2CLA880000A6201	8800 NT 8800 GN 8800 DN	Recycled PC (95% recycled content)	Blank cover plate Color: Black matt, Grey matt, Dune
3	2CLA880700A1101 2CLA880700A1001	8807 BL 8807 BT	Recycled PC (94% recycled content)	Cover plate cable outlet Color: White glossy, White matt
4	2CLA880700A1501 2CLA880700A1601 2CLA880700A6201	8807 NT 8807 GN 8807 DN	Recycled PC (95% recycled content)	Cover plate cable outlet Color: Black matt, Grey matt, Dune
5	2CLA881400A1101 2CLA881400A1001	8814 BL 8814 BT	Recycled PC (94% recycled content)	Cover keycard switch Color: White glossy, White matt
6	2CLA881400A1501 2CLA881400A1601 2CLA881400A6201	8814 NT 8814 GN 8814 DN	Recycled PC (95% recycled content)	Cover keycard switch Color: Black matt, Grey matt, Dune
7	2CLA881630A1101 2CLA881630A1001	8816.3 BL 8816.3 BT	Recycled PC (94% recycled content)	Cover plate for one data connector or housing Color: White glossy, White matt
8	2CLA881630A1501 2CLA881630A1601 2CLA881630A6201	8816.3 NT 8816.3 GN 8816.3 DN	Recycled PC (95% recycled content)	Cover plate for one data connector or housing Color: Black matt, Grey matt, Dune
9	2CLA881640A1101 2CLA881640A1001	8816.4 BL 8816.4 BT	Recycled PC (94% recycled content)	Cover plate for two data connector or housing Color: White glossy, White matt
10	2CLA881640A1501 2CLA881640A1601 2CLA881640A6201	8816.4 NT 8816.4 GN 8816.4 DN	Recycled PC (95% recycled content)	Cover plate for two data connector or housing Color: Black matt, Grey matt, Dune
11	2CLA881680A1101 2CLA881680A1001	8816.8 BL 8816.8 BT	Recycled PC (94% recycled content)	Cover plate at 45º for two data connector or housing Color: White glossy, White matt
12	2CLA881680A1501 2CLA881680A1601 2CLA881680A6201	8816.8 NT 8816.8 GN 8816.8 DN	Recycled PC (95% recycled content)	Cover plate at 45º for two data connector or housing Color: Black matt, Grey matt, Dune
13	2CLA882900A1101 2CLA882900A1001	8829 BL 8829 BT	Recycled PC (94% recycled content)	Cover plate for buzzer/door bell / 2" speaker Color: White glossy, White matt

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Products covered

General characteristics of all products covered by the EPD - part II

Variants group	Product code	Commercial reference	Material	Description
14	2CLA882900A1501 2CLA882900A1601 2CLA882900A6201	8829 NT 8829 GN 8829 DN	Recycled PC (95% recycled content)	Cover plate for buzzer/door bell / 2" speaker Color: Black matt, Grey matt, Dune
15	2CLA885000A1101 2CLA885000A1001	8850 BL 8850 BT	Recycled PC (94% recycled content)	Cover plate for TV outlet
	2CLA885010A1101 2CLA885010A1001	8850.1 BL 8850.1 BT	Color: White glossy, White matt	Cover plate for TV-R/SAT outlet
16	2CLA885000A1501 2CLA885000A1601 2CLA885000A6201	8850 NT 8850 GN 8850 DN	Recycled PC (95% recycled content)	Cover plate for TV outlet
	2CLA885010A1501 2CLA885010A1601 2CLA885010A6201	8850.1 NT 8850.1 GN 8850.1 DN	Color: Black matt, Grey matt, Dune	Cover plate for TV-R/SAT outlet
17	2CLA885300A1101 2CLA885300A1001	8853 BL 8853 BT	Recycled PC (94% recycled content)	Cover plate for TV outlet
	2CLA885310A1101 2CLA885310A1001	8853.1 BL 8853.1 BT		Cover plate for TV outlet
	2CLA885500A1101 2CLA885500A1001	8855 BL 8855 BT	Color: White glossy, White matt	Cover plate for 1-gang VDI connection unit
	2CLA885510A1101 2CLA885510A1001	8855.1 BL 8855.1 BT		Cover plate for 2-gangs VDI connection unit
18	2CLA885300A1501 2CLA885300A1601 2CLA885300A6201	8853 NT 8853 GN 8853 DN	Recycled PC (95% recycled content)	Cover plate for TV outlet
	2CLA885310A1501 2CLA885310A1601 2CLA885310A6201	8853.1 NT 8853.1 GN 8853.1 DN		Cover plate for TV outlet
	2CLA885500A1501 2CLA885500A1601 2CLA885500A6201	8855 NT 8855 GN 8855 DN	Color: Black matt, Grey matt, Dune	Cover plate for 1-gang VDI connection unit
	2CLA885510A1501 2CLA885510A1601 2CLA885510A6201	8855.1 NT 8855.1 GN 8855.1 DN		Cover plate for 2-gangs VDI connection unit
19	2CLA881700A1101 2CLA881700A1001	8817 BL 8817 BT	Recycled PC (94% recycled content)	Blank cover plate Color: White glossy, White matt
20	2CLA881700A1501 2CLA881700A1601 2CLA881700A6201	8817 NT 8817 GN 8817 DN	Recycled PC (95% recycled content)	Blank cover plate Color: Black matt, Grey matt, Dune

Extrapolation Factors

For products other than the reference product covered by this PEP, the total environmental impacts of the product life cycle, as well as, for manufacturing, distribution, installation, end-of-life stages and module D, are obtained by multiplying the values of the reference product by the extrapolation factors provided in the tables below, with the following formulas:

$$y = a * x_0$$

Where:

- y is the selected impact category;
- a is the extrapolation factor from the tables below
- x_0 is the environmental indicator of the reference product

Use stage

Due to the nature of products belonging to the Vega cover family, there is no energy consumption nor environmental impact during the use phase. Therefore, extrapolation factors for the use phase are not listed in any of the tables below. Each impact indicator for the use phase is the same as for the reference product and defaults to 0.

Extrapolation Factors

Total impact

Values of 'a' extrapolation factors to calculate total environmental impact score (1st-10th products variants groups)

Impact category	1st group of products variants	2nd group of products variants	3rd group of products variants	4th group of products variants	5th group of products variants	6th group of products variants	7th group of products variants	8th group of products variants	9th group of products variants	10th group of products variants
GWP-total	1.000	0.995	0.232	0.226	0.444	0.440	1.219	1.214	1.226	1.221
GWP- fossil		0.995	0.223	0.217	0.434	0.430	1.217	1.212	1.223	1.218
GWP-biogenic		0.999	0.831	0.830	1.065	1.065	1.269	1.268	1.290	1.290
GWP-luluc		0.999	0.622	0.621	1.151	1.151	1.716	1.716	1.974	1.974
ODP		0.991	0.307	0.295	0.806	0.798	1.304	1.295	1.319	1.310
AP		0.999	0.069	0.068	0.085	0.084	1.417	1.416	1.419	1.418
EP-freshwater		1.000	0.138	0.137	0.134	0.133	1.223	1.223	1.227	1.227
EP-marine		0.999	0.181	0.180	0.226	0.225	1.272	1.271	1.277	1.275
EP-terrestrial		0.999	0.047	0.046	0.063	0.063	1.463	1.462	1.464	1.464
POCP		0.997	0.168	0.165	0.216	0.214	1.223	1.220	1.228	1.225
ADP-minerals & metals		0.999	0.114	0.113	0.099	0.098	1.351	1.350	1.358	1.357
ADP-fossil		0.992	0.255	0.245	0.747	0.740	1.236	1.229	1.245	1.237
WDP		0.999	0.335	0.333	0.535	0.534	1.384	1.383	1.468	1.467
PERE		0.998	0.419	0.416	0.800	0.798	1.411	1.409	1.509	1.507
PERM		1.000	0.532	0.532	0.618	0.618	1.223	1.223	1.231	1.231
PERT		0.998	0.432	0.430	0.778	0.776	1.388	1.386	1.476	1.474
PENRE		0.992	0.255	0.245	0.747	0.740	1.236	1.229	1.245	1.237
PENRM		0.944	0.982	0.909	6.411	6.359	1.221	1.169	1.233	1.179
PENRT		0.991	0.276	0.264	0.909	0.900	1.235	1.227	1.245	1.236
SM		1.007	1.194	1.203	0.945	0.952	1.675	1.681	1.697	1.704
RSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NRSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FW		0.999	0.280	0.278	0.403	0.401	1.341	1.340	1.385	1.384
HWD		1.000	0.085	0.085	0.023	0.023	1.179	1.179	1.180	1.180
N-HWD		1.000	0.283	0.282	0.345	0.345	1.889	1.888	1.896	1.895
RWD		1.000	0.263	0.262	0.334	0.334	1.343	1.343	1.370	1.370
CfRu		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfR		1.000	0.391	0.391	0.510	0.510	1.276	1.276	1.283	1.283
MfER		1.000	0.486	0.486	0.620	0.620	1.279	1.279	1.287	1.287
EE		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, product		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, packaging		1.000	1.009	1.009	1.009	1.009	1.000	1.000	1.009	1.009
Tot PE		0.992	0.299	0.288	0.890	0.882	1.258	1.250	1.278	1.270
Efp		0.998	0.075	0.072	0.086	0.085	1.371	1.370	1.373	1.372
IrHH		0.998	0.277	0.274	0.541	0.539	1.346	1.344	1.375	1.373
EXT FW		0.999	0.063	0.062	0.157	0.156	1.186	1.185	1.188	1.187
HTX CE		1.000	0.024	0.024	0.016	0.016	1.138	1.137	1.138	1.138
HTX N-CE		0.997	0.205	0.201	0.206	0.204	1.523	1.520	1.531	1.528
IrLS		0.999	0.370	0.369	0.462	0.461	1.238	1.237	1.253	1.252

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Extrapolation Factors

Total impact

Values of 'a' extrapolation factors to calculate total environmental impact score (11th-20th products variants groups)

Impact category	11th group of products variants	12th group of products variants	13th group of products variants	14th group of products variants	15th group of products variants	16th group of products variants	17th group of products variants	18th group of products variants	19th group of products variants	20th group of products variants
GWP-total	1.309	1.309	0.201	0.197	0.151	0.146	0.211	0.206	0.194	0.190
GWP- fossil	1.301	1.301	0.194	0.190	0.144	0.139	0.206	0.201	0.187	0.183
GWP-biogenic	1.835	1.835	0.729	0.729	0.613	0.613	0.547	0.547	0.687	0.686
GWP-luluc	2.064	2.064	0.614	0.614	0.584	0.583	0.634	0.633	0.610	0.609
ODP	1.466	1.466	0.268	0.259	0.231	0.221	0.281	0.272	0.256	0.247
AP	1.439	1.439	0.063	0.063	0.039	0.038	0.069	0.069	0.062	0.061
EP-freshwater	1.291	1.291	0.124	0.124	0.094	0.094	0.158	0.157	0.119	0.119
EP-marine	1.341	1.341	0.165	0.164	0.105	0.104	0.182	0.181	0.160	0.159
EP-terrestrial	1.479	1.479	0.043	0.042	0.028	0.027	0.048	0.047	0.041	0.041
POCP	1.283	1.283	0.152	0.149	0.106	0.103	0.169	0.166	0.146	0.144
ADP-minerals & metals	1.392	1.392	0.104	0.103	0.058	0.057	0.109	0.108	0.101	0.101
ADP-fossil	1.334	1.334	0.223	0.216	0.166	0.157	0.237	0.229	0.215	0.208
WDP	1.516	1.516	0.325	0.324	0.237	0.236	0.332	0.331	0.321	0.320
PERE	1.630	1.630	0.388	0.386	0.342	0.340	0.694	0.692	0.351	0.349
PERM	1.578	1.578	0.466	0.466	0.402	0.402	2.232	2.232	0.301	0.301
PERT	1.623	1.623	0.397	0.396	0.349	0.347	0.880	0.878	0.345	0.343
PENRE	1.334	1.334	0.223	0.216	0.166	0.157	0.237	0.229	0.215	0.208
PENRM	1.435	1.435	0.839	0.787	0.602	0.543	0.825	0.769	0.786	0.736
PENRT	1.336	1.336	0.241	0.232	0.178	0.168	0.254	0.244	0.231	0.223
SM	2.338	2.338	0.952	0.958	0.935	0.942	0.660	0.667	0.926	0.932
RSF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NRSF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FW	1.452	1.452	0.266	0.265	0.180	0.178	0.277	0.275	0.261	0.260
HWD	1.199	1.199	0.082	0.082	0.023	0.023	0.085	0.085	0.081	0.081
N-HWD	2.011	2.011	0.232	0.231	0.218	0.217	0.236	0.236	0.212	0.212
RWD	1.464	1.464	0.227	0.227	0.200	0.200	0.260	0.260	0.219	0.219
CfRu	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfR	1.481	1.481	0.313	0.313	0.306	0.306	0.315	0.315	0.305	0.305
MfER	1.512	1.512	0.395	0.395	0.383	0.383	0.390	0.390	0.354	0.354
EE	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, product	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, packaging	2.000	2.000	1.009	1.009	0.716	0.716	0.870	0.870	1.000	1.000
Tot PE	1.378	1.378	0.264	0.256	0.203	0.195	0.345	0.337	0.248	0.241
Efp	1.399	1.399	0.066	0.065	0.046	0.045	0.073	0.071	0.064	0.063
IrHH	1.472	1.472	0.238	0.236	0.212	0.209	0.271	0.269	0.230	0.228
EXT FW	1.216	1.216	0.057	0.056	0.052	0.051	0.059	0.058	0.055	0.054
HTX CE	1.145	1.145	0.022	0.022	0.024	0.024	0.023	0.023	0.022	0.021
HTX N-CE	1.622	1.622	0.182	0.180	0.132	0.129	0.204	0.201	0.176	0.173
IrLS	1.456	1.456	0.323	0.323	0.274	0.273	0.924	0.923	0.249	0.249

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Extrapolation Factors

Manufacturing stage

Values of 'a' extrapolation factors to calculate environmental impact score of manufacturing stage (1st-10th products variants groups)

Impact category	1st group of products variants	2nd group of products variants	3rd group of products variants	4th group of products variants	5th group of products variants	6th group of products variants	7th group of products variants	8th group of products variants	9th group of products variants	10th group of products variants
GWP-total	1.000	0.994	0.100	0.092	0.329	0.323	1.215	1.210	1.222	1.216
GWP- fossil		0.994	0.152	0.144	0.365	0.360	1.200	1.195	1.205	1.200
GWP-biogenic		1.000	1.054	1.054	1.029	1.029	0.966	0.966	0.973	0.973
GWP-luluc		0.999	0.608	0.608	1.191	1.191	1.784	1.783	2.071	2.071
ODP		0.988	0.231	0.216	0.826	0.815	1.316	1.305	1.333	1.321
AP		0.999	0.051	0.050	0.061	0.061	1.423	1.423	1.425	1.424
EP-freshwater		1.000	0.075	0.075	0.050	0.049	1.218	1.218	1.221	1.221
EP-marine		0.998	0.118	0.116	0.147	0.145	1.274	1.272	1.277	1.276
EP-terrestrial		0.999	0.032	0.031	0.045	0.045	1.469	1.469	1.470	1.470
POCP		0.997	0.124	0.120	0.159	0.156	1.215	1.213	1.220	1.217
ADP-minerals & metals		0.999	0.081	0.080	0.050	0.049	1.354	1.353	1.361	1.360
ADP-fossil		0.991	0.209	0.197	0.766	0.757	1.227	1.218	1.236	1.227
WDP		0.998	0.331	0.329	0.552	0.551	1.407	1.405	1.502	1.501
PERE		0.998	0.406	0.403	0.826	0.824	1.433	1.431	1.545	1.543
PERM		1.000	0.532	0.532	0.618	0.618	1.223	1.223	1.231	1.231
PERT		0.998	0.424	0.421	0.797	0.795	1.404	1.402	1.502	1.500
PENRE		0.991	0.209	0.197	0.766	0.757	1.227	1.218	1.236	1.227
PENRM		0.944	0.982	0.909	6.411	6.359	1.221	1.169	1.233	1.179
PENRT		0.989	0.235	0.221	0.958	0.948	1.227	1.216	1.236	1.225
SM		1.007	1.194	1.203	0.945	0.952	1.675	1.681	1.697	1.704
RSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NRSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FW		0.998	0.255	0.252	0.386	0.384	1.362	1.361	1.414	1.412
HWD		1.000	0.085	0.085	0.009	0.009	1.164	1.164	1.165	1.165
N-HWD		1.000	0.109	0.108	0.100	0.100	2.036	2.035	2.040	2.039
RWD		0.999	0.183	0.182	0.217	0.216	1.371	1.370	1.409	1.409
CfRu		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfR		1.000	0.033	0.033	0.046	0.046	1.249	1.249	1.249	1.249
MfER		1.000	0.434	0.434	0.552	0.552	1.272	1.272	1.280	1.280
EE		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, product		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, packaging		1.000	1.009	1.009	1.009	1.009	1.000	1.000	1.009	1.009
Tot PE		0.994	0.100	0.092	0.329	0.323	1.215	1.210	1.222	1.216
Efp		0.994	0.152	0.144	0.365	0.360	1.200	1.195	1.205	1.200
IrHH		1.000	1.054	1.054	1.029	1.029	0.966	0.966	0.973	0.973
EXT FW		0.999	0.608	0.608	1.191	1.191	1.784	1.783	2.071	2.071
HTX CE		0.988	0.231	0.216	0.826	0.815	1.316	1.305	1.333	1.321
HTX N-CE		0.999	0.051	0.050	0.061	0.061	1.423	1.423	1.425	1.424
IrLS		1.000	0.075	0.075	0.050	0.049	1.218	1.218	1.221	1.221

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Extrapolation Factors

Manufacturing stage

Values of 'a' extrapolation factors to calculate environmental impact score of manufacturing stage (11th-20th products variants groups)

Impact category	11th group of products variants	12th group of products variants	13th group of products variants	14th group of products variants	15th group of products variants	16th group of products variants	17th group of products variants	18th group of products variants	19th group of products variants	20th group of products variants
GWP-total	1.202	1.202	0.088	0.083	0.044	0.038	0.109	0.103	0.082	0.077
GWP- fossil	1.246	1.246	0.141	0.136	0.082	0.076	0.154	0.148	0.135	0.130
GWP-biogenic	2.027	2.027	1.058	1.058	0.749	0.749	0.945	0.945	1.056	1.057
GWP-luluc	2.099	2.099	0.606	0.605	0.589	0.588	0.635	0.635	0.601	0.601
ODP	1.425	1.425	0.208	0.197	0.171	0.158	0.228	0.216	0.195	0.185
AP	1.434	1.434	0.049	0.048	0.024	0.023	0.055	0.054	0.048	0.047
EP-freshwater	1.243	1.243	0.073	0.072	0.044	0.043	0.115	0.115	0.069	0.068
EP-marine	1.299	1.299	0.114	0.112	0.053	0.051	0.136	0.134	0.110	0.109
EP-terrestrial	1.476	1.476	0.031	0.030	0.016	0.016	0.036	0.036	0.030	0.029
POCP	1.248	1.248	0.118	0.116	0.068	0.065	0.138	0.135	0.113	0.111
ADP-minerals & metals	1.379	1.379	0.079	0.078	0.030	0.029	0.084	0.083	0.078	0.077
ADP-fossil	1.293	1.293	0.190	0.181	0.123	0.113	0.206	0.196	0.182	0.173
WDP	1.521	1.521	0.326	0.325	0.231	0.230	0.337	0.335	0.323	0.321
PERE	1.641	1.641	0.385	0.383	0.335	0.333	0.739	0.737	0.344	0.341
PERM	1.578	1.578	0.466	0.466	0.402	0.402	2.232	2.232	0.301	0.301
PERT	1.633	1.633	0.396	0.394	0.344	0.342	0.944	0.942	0.338	0.336
PENRE	1.293	1.293	0.190	0.181	0.123	0.113	0.206	0.196	0.182	0.173
PENRM	1.435	1.435	0.839	0.787	0.602	0.543	0.825	0.769	0.786	0.736
PENRT	1.297	1.297	0.212	0.201	0.139	0.128	0.227	0.216	0.202	0.193
SM	2.338	2.338	0.952	0.958	0.935	0.942	0.660	0.667	0.926	0.932
RSF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NRSF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FW	1.441	1.441	0.250	0.248	0.153	0.151	0.266	0.264	0.245	0.244
HWD	1.180	1.180	0.085	0.085	0.012	0.012	0.088	0.088	0.084	0.084
N-HWD	2.075	2.075	0.100	0.100	0.082	0.081	0.102	0.101	0.081	0.080
RWD	1.455	1.455	0.179	0.178	0.131	0.130	0.226	0.226	0.172	0.171
CfRu	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfR	1.262	1.262	0.024	0.024	0.025	0.025	0.032	0.032	0.023	0.023
MfER	1.485	1.485	0.354	0.354	0.342	0.342	0.350	0.350	0.156	0.156
EE	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, product	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, packaging	2.000	2.000	1.009	1.009	0.716	0.716	0.870	0.870	1.000	1.000
Tot PE	1.348	1.348	0.240	0.231	0.170	0.160	0.335	0.326	0.223	0.214
Efp	1.395	1.395	0.050	0.048	0.028	0.026	0.056	0.055	0.048	0.046
IrHH	1.467	1.467	0.197	0.194	0.152	0.148	0.244	0.241	0.190	0.187
EXT FW	1.196	1.196	0.034	0.033	0.033	0.031	0.038	0.037	0.033	0.032
HTX CE	1.140	1.140	0.017	0.017	0.019	0.019	0.018	0.018	0.017	0.017
HTX N-CE	1.642	1.642	0.123	0.120	0.066	0.062	0.153	0.149	0.117	0.114
IrLS	1.424	1.424	0.288	0.287	0.237	0.236	0.986	0.985	0.205	0.204

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Extrapolation Factors

Distribution stage

Values of 'a' extrapolation factors to calculate environmental impact score of distribution stage (1st-20th products variants groups)

Impact category	1st and 2nd group of products variants	3rd and 4th group of products variants	5th and 6th group of products variants	7th and 8th group of products variants	9th and 10th group of products variants	11th and 12th group of products variants	13th and 14th group of products variants	15th and 16th group of products variants	17th and 18th group of products variants	19th and 20th group of products variants
GWP-total										
GWP- fossil										
GWP-biogenic										
GWP-luluc										
ODP										
AP										
EP-freshwater										
EP-marine										
EP-terrestrial										
POCP										
ADP-minerals & metals										
ADP-fossil										
WDP										
PERE										
PERM										
PERT										
PENRE										
PENRM										
PENRT										
SM	1.000	0.488	0.633	1.282	1.291	1.536	0.393	0.382	0.392	0.382
RSF										
NRSF										
FW										
HWD										
N-HWD										
RWD										
CfRu										
MfR										
MfER										
EE										
Biogenic C, product										
Biogenic C, packaging										
Tot PE										
Efp										
IrHH										
EXT FW										
HTX CE										
HTX N-CE										
IrLS										

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Extrapolation Factors

Installation stage

Values of 'a' extrapolation factors to calculate environmental impact score of installation stage (1st-20th products variants groups)

Impact category	1st and 2nd group of products variants	3rd and 4th group of products variants	5th and 6th group of products variants	7th and 8th group of products variants	9th and 10th group of products variants	11th and 12th group of products variants	13th and 14th group of products variants	15th and 16th group of products variants	17th and 18th group of products variants	19th and 20th group of products variants
GWP-total	1.000	1.008	0.999	1.005	1.014	1.956	1.008	0.721	0.867	1.000
GWP- fossil		1.007	0.974	1.020	1.027	1.841	1.007	0.734	0.860	
GWP-biogenic		1.009	1.008	1.000	1.009	1.999	1.009	0.716	0.870	
GWP-luluc		1.009	1.008	1.001	1.009	1.995	1.009	0.717	0.869	
ODP		1.009	1.004	1.002	1.011	1.981	1.009	0.718	0.868	
AP		1.008	1.001	1.004	1.013	1.965	1.008	0.720	0.867	
EP-freshwater		1.009	1.004	1.002	1.011	1.981	1.009	0.718	0.868	
EP-marine		1.008	1.004	1.003	1.011	1.978	1.008	0.719	0.868	
EP-terrestrial		1.008	1.003	1.003	1.012	1.972	1.008	0.719	0.868	
POCP		1.008	1.000	1.005	1.013	1.962	1.008	0.720	0.867	
ADP-minerals & metals		1.008	0.995	1.008	1.016	1.935	1.008	0.723	0.866	
ADP-fossil		1.008	1.001	1.004	1.013	1.964	1.008	0.720	0.867	
WDP		1.009	1.008	1.000	1.009	1.997	1.009	0.717	0.869	
PERE		1.008	1.003	1.004	1.012	1.972	1.008	0.719	0.868	
PERM		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
PERT		1.008	1.003	1.004	1.012	1.972	1.008	0.719	0.868	
PENRE		1.008	1.001	1.004	1.013	1.964	1.008	0.720	0.867	
PENRM		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
PENRT		1.008	1.001	1.004	1.013	1.964	1.008	0.720	0.867	
SM		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
RSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
NRSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
FW		1.009	1.006	1.001	1.010	1.990	1.009	0.717	0.869	
HWD		1.008	0.997	1.007	1.015	1.944	1.008	0.722	0.866	
N-HWD		1.007	0.973	1.021	1.028	1.835	1.007	0.734	0.859	
RWD		1.008	0.992	1.009	1.017	1.925	1.008	0.724	0.865	
CfRu		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
MfR		1.008	1.000	1.005	1.013	1.960	1.008	0.721	0.867	
MfER		1.006	0.955	1.031	1.037	1.752	1.006	0.744	0.854	
EE		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Biogenic C, product		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Biogenic C, packaging		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Tot PE		1.008	1.001	1.004	1.013	1.966	1.008	0.720	0.867	
Efp		1.008	0.997	1.007	1.015	1.948	1.008	0.722	0.866	
IrHH		1.008	0.992	1.009	1.017	1.926	1.008	0.724	0.865	
EXT FW		1.009	1.006	1.002	1.010	1.987	1.009	0.718	0.869	
HTX CE		1.008	0.990	1.011	1.018	1.915	1.008	0.726	0.864	
HTX N-CE		1.008	1.002	1.004	1.012	1.967	1.008	0.720	0.868	
IrLS		1.008	1.002	1.004	1.012	1.971	1.008	0.719	0.868	

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Extrapolation Factors

End-of-life stage

Values of 'a' extrapolation factors to calculate environmental impact score of end-of-life stage (1st-20th products variants groups)

Impact category	1st and 2nd group of products variants	3rd and 4th group of products variants	5th and 6th group of products variants	7th and 8th group of products variants	9th and 10th group of products variants	11th and 12th group of products variants	13th and 14th group of products variants	15th and 16th group of products variants	17th and 18th group of products variants	19th and 20th group of products variants
GWP-total	1.000	0.561	0.807	1.357	1.369	1.566	0.407	0.450	0.437	0.392
GWP- fossil		0.549	0.789	1.354	1.366	1.558	0.398	0.440	0.428	0.384
GWP-biogenic		0.999	1.454	1.446	1.468	1.820	0.720	0.790	0.775	0.694
GWP-luluc		0.394	0.560	1.323	1.331	1.468	0.287	0.319	0.308	0.277
ODP		0.464	0.664	1.337	1.347	1.509	0.337	0.374	0.362	0.325
AP		0.379	0.538	1.320	1.328	1.460	0.276	0.308	0.297	0.267
EP-freshwater		0.324	0.456	1.309	1.316	1.428	0.237	0.265	0.254	0.228
EP-marine		0.554	0.796	1.355	1.368	1.561	0.401	0.444	0.431	0.387
EP-terrestrial		0.398	0.566	1.324	1.332	1.471	0.290	0.323	0.311	0.280
POCP		0.432	0.615	1.330	1.340	1.490	0.314	0.349	0.337	0.303
ADP-minerals & metals		0.488	0.699	1.342	1.353	1.523	0.355	0.393	0.381	0.342
ADP-fossil		0.416	0.592	1.327	1.336	1.481	0.302	0.336	0.325	0.292
WDP		0.199	0.271	1.283	1.288	1.355	0.147	0.168	0.157	0.142
PERE		0.391	0.556	1.322	1.331	1.467	0.285	0.317	0.306	0.275
PERM		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
PERT		0.391	0.556	1.322	1.331	1.467	0.285	0.317	0.306	0.275
PENRE		0.416	0.592	1.327	1.336	1.481	0.302	0.336	0.325	0.292
PENRM		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
PENRT		0.416	0.592	1.327	1.336	1.481	0.302	0.336	0.325	0.292
SM		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
RSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NRSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FW		0.259	0.361	1.296	1.301	1.390	0.190	0.215	0.204	0.184
HWD		0.063	0.071	1.256	1.257	1.277	0.050	0.062	0.053	0.049
N-HWD		0.903	1.313	1.426	1.446	1.764	0.652	0.716	0.701	0.628
RWD		0.358	0.507	1.316	1.323	1.448	0.261	0.291	0.280	0.252
CfRu		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfR		0.405	0.576	1.325	1.334	1.475	0.295	0.328	0.316	0.284
MfER		0.405	0.576	1.325	1.334	1.475	0.295	0.328	0.316	0.284
EE		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, product		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, packaging		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Tot PE		0.413	0.588	1.327	1.336	1.479	0.300	0.334	0.323	0.290
Efp		0.277	0.387	1.299	1.305	1.401	0.203	0.228	0.218	0.196
IrHH		0.358	0.507	1.316	1.323	1.448	0.261	0.291	0.280	0.252
EXT FW		0.499	0.715	1.344	1.355	1.529	0.362	0.401	0.389	0.349
HTX CE		0.324	0.456	1.309	1.316	1.428	0.236	0.265	0.254	0.228
HTX N-CE		0.375	0.532	1.319	1.327	1.458	0.273	0.305	0.294	0.264
IrLS		0.556	0.799	1.356	1.368	1.562	0.403	0.445	0.433	0.388

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Extrapolation Factors

Module D - N**et benefits and loads**

Values of 'a' extrapolation factors to calculate environmental impact score of Module D (1st-10th products variants groups)

Impact category	1st group of products variants	2nd group of products variants	3rd group of products variants	4th group of products variants	5th group of products variants	6th group of products variants	7th group of products variants	8th group of products variants	9th group of products variants	10th group of products variants
GWP-total	1.000	0.993	0.005	-0.004	0.555	0.548	1.011	1.005	1.009	1.003
GWP- fossil		0.993	-0.012	-0.021	0.545	0.539	1.011	1.005	1.009	1.002
GWP-biogenic		0.998	0.975	0.973	1.110	1.109	1.014	1.013	1.023	1.021
GWP-luluc		0.991	-0.100	-0.111	0.669	0.661	1.022	1.014	1.020	1.011
ODP		0.968	-0.185	-0.226	2.582	2.552	0.940	0.910	0.931	0.901
AP		0.997	0.033	0.029	0.254	0.251	1.031	1.028	1.030	1.027
EP-freshwater		1.000	0.044	0.044	0.030	0.030	1.081	1.081	1.081	1.081
EP-marine		0.996	0.015	0.010	0.303	0.300	1.032	1.028	1.030	1.026
EP-terrestrial		0.996	0.011	0.006	0.295	0.291	1.032	1.029	1.031	1.027
POCP		0.997	0.021	0.017	0.235	0.232	1.042	1.039	1.041	1.038
ADP-minerals & metals		1.000	0.101	0.101	0.012	0.012	1.060	1.059	1.060	1.059
ADP-fossil		0.980	-0.139	-0.164	1.521	1.503	0.946	0.928	0.940	0.921
WDP		0.991	-0.188	-0.201	0.716	0.707	1.015	1.006	1.012	1.003
PERE		0.984	-0.370	-0.391	0.983	0.968	1.013	0.998	1.006	0.991
PERM		1.000	1.009	1.009	1.009	1.009	1.000	1.000	1.009	1.009
PERT		0.978	-0.866	-0.895	0.974	0.954	1.018	0.997	1.005	0.984
PENRE		0.980	-0.139	-0.164	1.521	1.503	0.946	0.928	0.940	0.921
PENRM		1.120	1.438	1.593	-8.876	-8.766	1.826	1.937	1.870	1.985
PENRT		0.972	-0.227	-0.263	2.106	2.080	0.897	0.871	0.887	0.861
SM		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
RSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NRSF		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FW		0.993	-0.078	-0.087	0.551	0.545	1.029	1.023	1.027	1.021
HWD		1.000	0.086	0.086	0.000	0.000	1.053	1.053	1.053	1.053
N-HWD		1.000	0.038	0.038	0.009	0.009	0.979	0.979	0.979	0.979
RWD		1.000	0.267	0.267	0.276	0.276	1.159	1.159	1.163	1.163
CfRu		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfR		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfER		1.000	1.000	1.000	0.815	0.815	1.111	1.111	1.111	1.111
EE		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, product		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, packaging		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Tot PE		0.973	-0.260	-0.296	2.047	2.022	0.903	0.878	0.894	0.867
Efp		0.999	0.024	0.022	0.105	0.104	1.004	1.003	1.003	1.002
IrHH		0.991	0.265	0.253	0.944	0.935	1.085	1.076	1.085	1.076
EXT FW		0.999	-0.004	-0.006	0.089	0.088	1.125	1.124	1.124	1.123
HTX CE		1.000	0.011	0.011	0.002	0.001	1.149	1.149	1.149	1.149
HTX N-CE		1.000	0.069	0.069	0.016	0.015	1.056	1.056	1.056	1.056
IrLS		0.997	-0.672	-0.676	-0.481	-0.484	1.067	1.065	1.060	1.057

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Extrapolation Factors

Module D - N**et benefits and loads**

Values of 'a' extrapolation factors to calculate environmental impact score of Module D (11th-20th products variants groups)

Impact category	11th group of products variants	12th group of products variants	13th group of products variants	14th group of products variants	15th group of products variants	16th group of products variants	17th group of products variants	18th group of products variants	19th group of products variants	20th group of products variants
GWP-total	0.993	0.983	0.030	0.024	-0.037	-0.045	-0.027	-0.033	0.032	0.026
GWP- fossil	0.976	0.966	0.014	0.007	-0.050	-0.057	0.090	0.083	0.016	0.010
GWP-biogenic	1.973	1.971	0.976	0.974	0.683	0.681	-6.785	-6.787	0.967	0.966
GWP-luluc	0.860	0.847	-0.087	-0.095	-0.114	-0.123	1.334	1.325	-0.085	-0.093
ODP	0.786	0.740	-0.080	-0.110	-0.256	-0.290	0.280	0.248	-0.070	-0.099
AP	1.016	1.011	0.043	0.040	-0.012	-0.015	0.128	0.125	0.044	0.042
EP-freshwater	1.083	1.083	0.039	0.039	0.032	0.032	0.140	0.140	0.039	0.039
EP-marine	1.005	0.999	0.030	0.026	-0.025	-0.029	0.159	0.155	0.031	0.027
EP-terrestrial	1.008	1.003	0.025	0.022	-0.024	-0.028	0.130	0.126	0.027	0.023
POCP	1.024	1.020	0.030	0.027	-0.008	-0.011	0.140	0.137	0.031	0.028
ADP-minerals & metals	1.072	1.072	0.100	0.100	0.002	0.002	0.145	0.144	0.100	0.100
ADP-fossil	0.841	0.813	-0.061	-0.080	-0.187	-0.208	0.048	0.028	-0.054	-0.072
WDP	0.957	0.944	-0.151	-0.160	-0.076	-0.086	-0.004	-0.013	-0.148	-0.156
PERE	0.634	0.611	-0.319	-0.334	-0.357	-0.374	2.474	2.458	-0.311	-0.325
PERM	2.000	2.000	1.009	1.009	0.716	0.716	-7.130	-7.130	1.000	1.000
PERT	0.142	0.111	-0.797	-0.817	-0.744	-0.767	5.935	5.913	-0.784	-0.803
PENRE	0.841	0.813	-0.061	-0.080	-0.187	-0.208	0.048	0.028	-0.054	-0.072
PENRM	2.558	2.729	0.892	1.003	1.477	1.604	1.014	1.134	0.841	0.947
PENRT	0.745	0.705	-0.115	-0.140	-0.281	-0.310	-0.006	-0.034	-0.104	-0.129
SM	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
RSF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NRSF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FW	0.999	0.990	-0.059	-0.065	-0.029	-0.036	0.101	0.094	-0.057	-0.063
HWD	1.067	1.067	0.086	0.086	0.006	0.006	0.096	0.096	0.086	0.086
N-HWD	0.980	0.980	0.037	0.037	0.030	0.030	0.081	0.081	0.037	0.037
RWD	1.233	1.233	0.219	0.219	0.174	0.174	0.470	0.470	0.214	0.214
CfRu	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MfER	1.111	1.111	1.000	1.000	0.815	0.815	0.815	0.815	1.000	1.000
EE	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, product	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Biogenic C, packaging	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Tot PE	0.713	0.675	-0.150	-0.176	-0.305	-0.333	0.301	0.274	-0.139	-0.164
Efp	0.994	0.991	0.029	0.028	-0.001	-0.003	0.105	0.104	0.030	0.029
IrHH	1.098	1.085	0.262	0.253	0.045	0.035	0.490	0.481	0.262	0.253
EXT FW	1.119	1.117	0.001	0.000	0.010	0.009	0.008	0.007	0.002	0.001
HTX CE	1.150	1.150	0.011	0.011	0.025	0.025	0.013	0.013	0.011	0.011
HTX N-CE	1.056	1.056	0.067	0.067	0.008	0.008	0.205	0.205	0.067	0.067
IrLS	0.330	0.326	-0.665	-0.667	-0.520	-0.523	5.414	5.411	-0.657	-0.660

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Glossary

Environmental impact Indicators	
GWP-total	Global Warming Potential total (Climate change)
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 reach in marine end compartment
EP-terrestrial	Eutrophication potential - Accumulated Exceedance
POCP	Formation potential of tropospheric ozone
ADP-minerals & metals	Abiotic Depletion for non-fossil resources potential
ADP-fossil	Abiotic Depletion for fossil resources potential
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 secondary 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

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