

This appendix refers to the EPD >MD-21010-EN_rev1<, developed according to EN15804+A2:2019. Results in the appendix communicates LCA results in the format described in EN15804+A1:2013, in order to accommodate a need in the transition period between the two standard revisions. The appendix cannot stand alone, as the reference EPD describes the basis of the assessment.

Cembrit Windstopper Extreme

The declared unit is for 1 m² of Cembrit Windstopper Extreme with a thickness of 9 mm. A conversion factor 0.5 must be applied, when calculating results LCIA results for Cembrit Windstopper Extreme with a thickness of 4.5 mm.

Table 1 – LCIA results for the declared unit (1 m² Cembrit Windstopper Extreme)

ENVIRONMENTAL IMPACTS PER m ² CEMBRIT WINDSTOPPER EXTREME										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ -eq.]	9.19E+00	2.73E+00	2.16E-02	0.00E+00	8.26E-03	1.02E-01	0.00E+00	1.86E-01	0.00E+00
ODP	[kg CFC11-eq.]	4.86E-08	6.80E-16	-1.31E-16	0.00E+00	2.06E-18	2.54E-17	0.00E+00	1.02E-15	0.00E+00
AP	[kg SO ₂ -eq.]	1.63E-02	2.31E-03	1.29E-05	0.00E+00	3.01E-05	8.89E-05	0.00E+00	1.18E-03	0.00E+00
EP	[kg PO ₄ ³⁻ -eq.]	3.92E-03	4.24E-04	4.73E-06	0.00E+00	7.00E-06	1.66E-05	0.00E+00	1.33E-04	0.00E+00
POCP	[kg ethene-eq.]	1.62E-03	-2.56E-06	1.27E-06	0.00E+00	2.90E-06	-1.20E-06	0.00E+00	8.95E-05	0.00E+00
ADPE	[kg Sb-eq.]	5.52E-05	2.25E-07	-1.06E-09	0.00E+00	6.84E-10	8.40E-09	0.00E+00	1.87E-08	0.00E+00
ADPF	[MJ]	6.60E+01	3.69E+01	-9.87E-03	0.00E+00	1.12E-01	1.38E+00	0.00E+00	2.63E+00	0.00E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

Table 2 – LCIA results for the declared unit (1 m² Cembrit Windstopper Extreme)

RESOURCE USE PER m ² CEMBRIT WINDSTOPPER EXTREME										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	1.76E+01	2.15E+00	-5.70E-02	0.00E+00	6.51E-03	8.00E-02	0.00E+00	3.55E-01	0.00E+00
PERM	[MJ]	9.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.76E+01	2.15E+00	-5.70E-02	0.00E+00	6.51E-03	8.00E-02	0.00E+00	3.55E-01	0.00E+00
PENRE	[MJ]	8.13E+01	3.73E+01	-4.41E-02	0.00E+00	1.13E-01	1.39E+00	0.00E+00	2.71E+00	0.00E+00
PENRM	[MJ]	2.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	8.13E+01	3.73E+01	-4.41E-02	0.00E+00	1.13E-01	1.39E+00	0.00E+00	2.71E+00	0.00E+00
SM	[MJ]	4.32E-02	0.00E+00	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	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	0.00E+00	0.00E+00
FW	[m ³]	4.32E-02	2.50E-03	6.17E-06	0.00E+00	7.59E-06	9.33E-05	0.00E+00	6.84E-04	0.00E+00
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water									

Table 3 – LCIA results for the declared unit (1 m² Cembrit Windstopper Extreme)

WASTE CATEGORIES AND OUTPUT FLOWS PER m ² CEMBRIT WINDSTOPPER EXTREME										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	1.73E-07	1.72E-06	5.14E-09	0.00E+00	5.23E-09	6.43E-08	0.00E+00	4.13E-08	0.00E+00
NHWD	[kg]	1.57E+00	5.90E-03	2.29E-03	0.00E+00	1.79E-05	2.20E-04	0.00E+00	1.36E+01	0.00E+00
RWD	[kg]	5.52E-03	6.87E-05	-1.29E-05	0.00E+00	2.08E-07	2.56E-06	0.00E+00	3.09E-05	0.00E+00
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	[kg]	5.00E-01	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy
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Cembrit Windstopper Extreme (Anthracite)

The declared unit is for 1 m² of Cembrit Windstopper Extreme (Anthracite) with a thickness of 9 mm. A conversion factor 0.5 must be applied, when calculating results LCIA results for Cembrit Windstopper Extreme (Anthracite) with a thickness of 4.5 mm.

Table 4 – LCIA results for the declared unit (1 m² Cembrit Windstopper Extreme (Anthracite)).

ENVIRONMENTAL IMPACTS PER m ² CEMBRIT WINDSTOPPER EXTREME (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ -eq.]	9.35E+00	2.87E+00	2.20E-02	0.00E+00	8.68E-03	1.07E-01	0.00E+00	1.95E-01	0.00E+00
ODP	[kg CFC11-eq.]	5.08E-08	7.16E-16	-1.31E-16	0.00E+00	2.17E-18	2.67E-17	0.00E+00	1.07E-15	0.00E+00
AP	[kg SO ₂ -eq.]	1.65E-02	2.43E-03	1.45E-05	0.00E+00	3.16E-05	9.36E-05	0.00E+00	1.24E-03	0.00E+00
EP	[kg PO ₄ ³⁻ -eq.]	4.02E-03	4.46E-04	5.10E-06	0.00E+00	7.37E-06	1.74E-05	0.00E+00	1.40E-04	0.00E+00
POCP	[kg ethene-eq.]	1.64E-03	-2.69E-06	1.42E-06	0.00E+00	3.05E-06	-1.31E-06	0.00E+00	9.42E-05	0.00E+00
ADPE	[kg Sb-eq.]	5.53E-05	2.37E-07	-1.02E-09	0.00E+00	7.19E-10	8.84E-09	0.00E+00	1.97E-08	0.00E+00
ADPF	[MJ]	6.85E+01	3.88E+01	-3.86E-03	0.00E+00	1.18E-01	1.45E+00	0.00E+00	2.77E+00	0.00E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

Table 5 – LCIA results for the declared unit (1 m² Cembrit Windstopper Extreme (Anthracite)).

RESOURCE USE PER m ² CEMBRIT WINDSTOPPER EXTREME (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	1.73E+01	2.26E+00	-5.65E-02	0.00E+00	6.85E-03	8.42E-02	0.00E+00	3.74E-01	0.00E+00
PERM	[MJ]	9.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.73E+01	2.26E+00	-5.65E-02	0.00E+00	6.85E-03	8.42E-02	0.00E+00	3.74E-01	0.00E+00
PENRE	[MJ]	8.33E+01	3.92E+01	-3.80E-02	0.00E+00	1.19E-01	1.46E+00	0.00E+00	2.85E+00	0.00E+00
PENRM	[MJ]	2.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	8.33E+01	3.92E+01	-3.80E-02	0.00E+00	1.19E-01	1.46E+00	0.00E+00	2.85E+00	0.00E+00
SM	[MJ]	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00
FW	[m ³]	8.54E-02	2.63E-03	6.56E-06	0.00E+00	7.98E-06	9.81E-05	0.00E+00	7.19E-04	0.00E+00
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water									

Table 6 – LCIA results for the declared unit (1 m² Cembrit Windstopper Extreme (Anthracite)).

WASTE CATEGORIES AND OUTPUT FLOWS PER m ² CEMBRIT WINDSTOPPER EXTREME (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	2.20E-07	1.81E-06	5.41E-09	0.00E+00	5.50E-09	6.76E-08	0.00E+00	4.35E-08	0.00E+00
NHWD	[kg]	1.58E+00	6.21E-03	2.28E-03	0.00E+00	1.88E-05	2.32E-04	0.00E+00	1.43E+01	0.00E+00
RWD	[kg]	5.32E-03	7.22E-05	-1.29E-05	0.00E+00	2.19E-07	2.69E-06	0.00E+00	3.25E-05	0.00E+00
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	[kg]	5.00E-01	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy									

Cembrit Windstopper Basic

Table 7 – LCIA results for the declared unit (1 m² Cembrit Windstopper Basic).

ENVIRONMENTAL IMPACTS PER m ² CEMBRIT WINDSTOPPER BASIC										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ -eq.]	6.03E+00	2.58E+00	2.02E-02	0.00E+00	9.62E-02	7.79E-03	0.00E+00	1.75E-01	0.00E+00
ODP	[kg CFC11-eq.]	3.02E-08	6.42E-16	-1.22E-16	0.00E+00	2.39E-17	1.95E-18	0.00E+00	9.64E-16	0.00E+00
AP	[kg SO ₂ -eq.]	1.02E-02	2.18E-03	1.24E-05	0.00E+00	8.39E-05	2.84E-05	0.00E+00	1.11E-03	0.00E+00
EP	[kg PO ₄ ³⁻ -eq.]	2.39E-03	4.00E-04	4.49E-06	0.00E+00	1.56E-05	6.60E-06	0.00E+00	1.25E-04	0.00E+00
POCP	[kg ethene-eq.]	1.02E-03	-2.42E-06	1.22E-06	0.00E+00	-1.18E-06	2.74E-06	0.00E+00	8.44E-05	0.00E+00
ADPE	[kg Sb-eq.]	3.43E-05	2.13E-07	-9.81E-10	0.00E+00	7.93E-09	6.45E-10	0.00E+00	1.77E-08	0.00E+00
ADPF	[MJ]	4.34E+01	3.48E+01	-7.83E-03	0.00E+00	1.30E+00	1.06E-01	0.00E+00	2.48E+00	0.00E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

Table 8 – LCIA results for the declared unit (1 m² Cembrit Windstopper Basic).

RESOURCE USE PER m ² CEMBRIT WINDSTOPPER BASIC										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	1.03E+01	2.02E+00	-5.30E-02	0.00E+00	7.55E-02	6.14E-03	0.00E+00	3.35E-01	0.00E+00
PERM	[MJ]	5.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.03E+01	2.02E+00	-5.30E-02	0.00E+00	7.55E-02	6.14E-03	0.00E+00	3.35E-01	0.00E+00
PENRE	[MJ]	5.24E+01	3.51E+01	-3.97E-02	0.00E+00	1.31E+00	1.07E-01	0.00E+00	2.56E+00	0.00E+00
PENRM	[MJ]	3.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	5.24E+01	3.51E+01	-3.97E-02	0.00E+00	1.31E+00	1.07E-01	0.00E+00	2.56E+00	0.00E+00
SM	[MJ]	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00
FW	[m ³]	2.14E-02	2.36E-03	5.83E-06	0.00E+00	8.80E-05	7.16E-06	0.00E+00	6.45E-04	0.00E+00
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water									

Table 9 – LCIA results for the declared unit (1 m² Cembrit Windstopper Basic).

WASTE CATEGORIES AND OUTPUT FLOWS PER m ² CEMBRIT WINDSTOPPER BASIC										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	1.46E-07	1.62E-06	4.85E-09	0.00E+00	6.06E-08	4.93E-09	0.00E+00	3.90E-08	0.00E+00
NHWD	[kg]	7.45E-01	5.57E-03	2.13E-03	0.00E+00	2.08E-04	1.69E-05	0.00E+00	1.29E+01	0.00E+00
RWD	[kg]	3.25E-03	6.48E-05	-1.20E-05	0.00E+00	2.42E-06	1.97E-07	0.00E+00	2.91E-05	0.00E+00
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	[kg]	2.50E-01	0.00E+00	9.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy									

Swisspearl Construction

The declared unit is for 1 m² of Swisspearl Construction with a thickness of 9 mm. A conversion factor 0.667, 0.889 and 1.11 must be applied, when calculating results LCIA results for Swisspearl Construction with a respective thickness of 6, 8 and 10 mm.

Table 10 – LCIA results for the declared unit (1 m² Swisspearl Construction).

ENVIRONMENTAL IMPACTS PER m ² SWISSPEARL CONSTRUCTION										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ -eq.]	1.15E+01	3.19E+00	2.70E-02	0.00E+00	1.19E-01	9.64E-03	0.00E+00	2.17E-01	0.00E+00
ODP	[kg CFC11-eq.]	4.13E-08	7.94E-16	-1.71E-16	0.00E+00	2.96E-17	2.41E-18	0.00E+00	1.19E-15	0.00E+00
AP	[kg SO ₂ -eq.]	2.06E-02	2.69E-03	1.28E-05	0.00E+00	1.04E-04	3.51E-05	0.00E+00	1.38E-03	0.00E+00
EP	[kg PO ₄ ³⁻ -eq.]	4.79E-03	4.95E-04	5.23E-06	0.00E+00	1.93E-05	8.17E-06	0.00E+00	1.55E-04	0.00E+00
POCP	[kg ethene-eq.]	2.21E-03	-2.99E-06	1.27E-06	0.00E+00	-1.46E-06	3.39E-06	0.00E+00	1.04E-04	0.00E+00
ADPE	[kg Sb-eq.]	4.35E-05	2.63E-07	-1.47E-09	0.00E+00	9.81E-09	7.98E-10	0.00E+00	2.19E-08	0.00E+00
ADPF	[MJ]	9.30E+01	4.30E+01	-2.74E-02	0.00E+00	1.61E+00	1.31E-01	0.00E+00	3.07E+00	0.00E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

Table 11 – LCIA results for the declared unit (1 m² Swisspearl Construction).

RESOURCE USE PER m ² SWISSPEARL CONSTRUCTION										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	1.98E+01	2.50E+00	-7.48E-02	0.00E+00	9.34E-02	7.60E-03	0.00E+00	4.15E-01	0.00E+00
PERM	[MJ]	7.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.98E+01	2.50E+00	-7.48E-02	0.00E+00	9.34E-02	7.60E-03	0.00E+00	4.15E-01	0.00E+00
PENRE	[MJ]	1.07E+02	4.35E+01	-7.20E-02	0.00E+00	1.62E+00	1.32E-01	0.00E+00	3.17E+00	0.00E+00
PENRM	[MJ]	9.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	1.07E+02	4.35E+01	-7.20E-02	0.00E+00	1.62E+00	1.32E-01	0.00E+00	3.17E+00	0.00E+00
SM	[MJ]	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00
FW	[m ³]	5.53E-02	2.92E-03	7.01E-06	0.00E+00	1.09E-04	8.85E-06	0.00E+00	7.98E-04	0.00E+00
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water									

Table 12 – LCIA results for the declared unit (1 m² Swisspearl Construction).

WASTE CATEGORIES AND OUTPUT FLOWS PER m ² SWISSPEARL CONSTRUCTION										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	7.95E-08	2.01E-06	5.98E-09	0.00E+00	7.50E-08	6.10E-09	0.00E+00	4.35E-08	0.00E+00
NHWD	[kg]	8.90E-01	6.89E-03	2.96E-03	0.00E+00	2.57E-04	2.09E-05	0.00E+00	1.43E+01	4.83E-08
RWD	[kg]	5.12E-03	8.01E-05	-1.68E-05	0.00E+00	2.99E-06	2.43E-07	0.00E+00	3.25E-05	1.59E+01
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	[kg]	2.80E-01	0.00E+00	1.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy									

Swisspearl Construction (Anthracite)

The declared unit is for 1 m² of Swisspearl Construction (Anthracite) with a thickness of 9 mm. A conversion factor 0.889 must be applied, when calculating results LCIA results for Swisspearl Construction (Anthracite) with a thickness of 8 mm.

Table 13 – LCIA results for the declared unit (1 m² Swisspearl Construction (Anthracite))

ENVIRONMENTAL IMPACTS PER M ² SWISSPEARL CONSTRUCTION (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ -eq.]	1.15E+01	3.24E+00	2.71E-02	0.00E+00	9.76E-03	1.21E-01	0.00E+00	2.19E-01	0.00E+00
ODP	[kg CFC11-eq.]	4.13E-08	8.06E-16	-1.71E-16	0.00E+00	2.44E-18	3.00E-17	0.00E+00	1.21E-15	0.00E+00
AP	[kg SO ₂ -eq.]	2.06E-02	2.74E-03	1.32E-05	0.00E+00	3.55E-05	1.05E-04	0.00E+00	1.40E-03	0.00E+00
EP	[kg PO ₄ ³⁻ -eq.]	4.79E-03	5.03E-04	5.33E-06	0.00E+00	8.27E-06	1.96E-05	0.00E+00	1.57E-04	0.00E+00
POCP	[kg ethene-eq.]	2.21E-03	-3.03E-06	1.31E-06	0.00E+00	3.43E-06	-1.47E-06	0.00E+00	1.06E-04	0.00E+00
ADPE	[kg Sb-eq.]	4.35E-05	2.67E-07	-1.46E-09	0.00E+00	8.08E-10	9.93E-09	0.00E+00	2.22E-08	0.00E+00
ADPF	[MJ]	9.30E+01	4.37E+01	-2.58E-02	0.00E+00	1.32E-01	1.63E+00	0.00E+00	3.11E+00	0.00E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

Table 14 – LCIA results for the declared unit (1 m² Swisspearl Construction (Anthracite))

RESOURCE USE PER m ² SWISSPEARL CONSTRUCTION (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	1.99E+01	2.54E+00	-7.47E-02	0.00E+00	7.69E-03	9.46E-02	0.00E+00	4.20E-01	0.00E+00
PERM	[MJ]	7.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.99E+01	2.54E+00	-7.47E-02	0.00E+00	7.69E-03	9.46E-02	0.00E+00	4.20E-01	0.00E+00
PENRE	[MJ]	1.07E+02	4.41E+01	-7.03E-02	0.00E+00	1.34E-01	1.64E+00	0.00E+00	3.21E+00	0.00E+00
PENRM	[MJ]	9.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	1.07E+02	4.41E+01	-7.03E-02	0.00E+00	1.34E-01	1.64E+00	0.00E+00	3.21E+00	0.00E+00
SM	[MJ]	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00
FW	[m ³]	6.61E-02	2.96E-03	7.12E-06	0.00E+00	8.97E-06	1.10E-04	0.00E+00	8.08E-04	0.00E+00
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water									

Table 15 – LCIA results for the declared unit (1 m² Swisspearl Construction (Anthracite))

WASTE CATEGORIES AND OUTPUT FLOWS PER m ² SWISSPEARL CONSTRUCTION (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	8.02E-08	2.04E-06	6.06E-09	0.00E+00	6.18E-09	7.59E-08	0.00E+00	4.89E-08	0.00E+00
NHWD	[kg]	8.94E-01	6.99E-03	2.96E-03	0.00E+00	2.12E-05	2.60E-04	0.00E+00	1.61E+01	0.00E+00
RWD	[kg]	5.12E-03	8.13E-05	-1.68E-05	0.00E+00	2.46E-07	3.03E-06	0.00E+00	3.65E-05	0.00E+00
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	[kg]	2.80E-01	0.00E+00	1.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy									

Swisspearl Multi Force

The declared unit is for 1 m² of Swisspearl Multi Force with a thickness of 9 mm. A conversion factor 1,33 must be applied, when calculating results LCIA results for Swisspearl Multi Force with a thickness of 12 mm.

Table 16 – LCIA results for the declared unit (1 m² Swisspearl Multi Force)

ENVIRONMENTAL IMPACTS PER M ² SWISSPEARL MULTI FORCE										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ -eq.]	6.78E+00	1.89E+00	1.64E-02	0.00E+00	5.70E-03	7.04E-02	0.00E+00	1.28E-01	0.00E+00
ODP	[kg CFC111-eq.]	3.30E-08	4.69E-16	-1.05E-16	0.00E+00	1.42E-18	1.75E-17	0.00E+00	7.05E-16	0.00E+00
AP	[kg SO ₂ -eq.]	1.17E-02	1.59E-03	7.03E-06	0.00E+00	2.07E-05	6.14E-05	0.00E+00	8.15E-04	0.00E+00
EP	[kg PO ₄ ³⁻ -eq.]	2.70E-03	2.93E-04	3.02E-06	0.00E+00	4.83E-06	1.14E-05	0.00E+00	9.16E-05	0.00E+00
POCP	[kg ethene-eq.]	1.16E-03	-1.77E-06	6.97E-07	0.00E+00	2.00E-06	-8.61E-07	0.00E+00	6.18E-05	0.00E+00
ADPE	[kg Sb-eq.]	3.75E-05	1.55E-07	-9.23E-10	0.00E+00	4.72E-10	5.80E-09	0.00E+00	1.29E-08	0.00E+00
ADPF	[MJ]	5.05E+01	2.54E+01	-2.00E-02	0.00E+00	7.72E-02	9.49E-01	0.00E+00	1.81E+00	0.00E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

Table 17 – LCIA results for the declared unit (1 m² Swisspearl Multi Force)

RESOURCE USE PER m ² SWISSPEARL MULTI FORCE										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	1.15E+01	1.48E+00	-4.62E-02	0.00E+00	4.49E-03	5.52E-02	0.00E+00	2.45E-01	0.00E+00
PERM	[MJ]	6.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.15E+01	1.48E+00	-4.62E-02	0.00E+00	4.49E-03	5.52E-02	0.00E+00	2.45E-01	0.00E+00
PENRE	[MJ]	6.10E+01	2.57E+01	-4.75E-02	0.00E+00	7.80E-02	9.59E-01	0.00E+00	1.87E+00	0.00E+00
PENRM	[MJ]	6.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	6.10E+01	2.57E+01	-4.75E-02	0.00E+00	7.80E-02	9.59E-01	0.00E+00	1.87E+00	0.00E+00
SM	[MJ]	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00
FW	[m ³]	2.28E-02	1.73E-03	4.10E-06	0.00E+00	5.23E-06	6.43E-05	0.00E+00	4.72E-04	0.00E+00
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water									

Table 18 – LCIA results for the declared unit (1 m² Swisspearl Multi Force)

WASTE CATEGORIES AND OUTPUT FLOWS PER m ² SWISSPEARL MULTI FORCE										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	1.75E-07	1.19E-06	3.53E-09	0.00E+00	3.61E-09	4.43E-08	0.00E+00	2.85E-08	0.00E+00
NHWD	[kg]	7.90E-01	4.07E-03	1.82E-03	0.00E+00	1.24E-05	1.52E-04	0.00E+00	9.41E+00	0.00E+00
RWD	[kg]	3.79E-03	4.74E-05	-1.04E-05	0.00E+00	1.44E-07	1.77E-06	0.00E+00	2.13E-05	0.00E+00
CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	[kg]	2.50E-01	0.00E+00	8.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy									

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