

This appendix refers to the EPD >MD-21010-EN<, 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.

### Cembit Windstopper Extreme

The declared unit is for 1 m<sup>2</sup> of Cembit Windstopper Extreme with a thickness of 9 mm. A conversion factor 0.5 must be applied, when calculating results LCIA results for Cembit Windstopper Extreme with a thickness of 4.5 mm.

Table 1 – LCIA results for the declared unit (1 m<sup>2</sup> Cembit Windstopper Extreme)

ENVIRONMENTAL IMPACTS PER m <sup>2</sup> CEMBRIT WINDSTOPPER EXTREME										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -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 <sub>2</sub> -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 <sub>4</sub> <sup>3-</sup> -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 m<sup>2</sup> Cembit Windstopper Extreme)

RESOURCE USE PER m <sup>2</sup> 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 <sup>3</sup> ]	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 m<sup>2</sup> Cembit Windstopper Extreme)

WASTE CATEGORIES AND OUTPUT FLOWS PER m <sup>2</sup> 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 m<sup>2</sup> 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 m<sup>2</sup> Cembrit Windstopper Extreme (Anthracite)).

ENVIRONMENTAL IMPACTS PER m <sup>2</sup> CEMBRIT WINDSTOPPER EXTREME (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -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 <sub>2</sub> -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 <sub>4</sub> <sup>3-</sup> -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 m<sup>2</sup> Cembrit Windstopper Extreme (Anthracite)).

RESOURCE USE PER m <sup>2</sup> 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 <sup>3</sup> ]	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 m<sup>2</sup> Cembrit Windstopper Extreme (Anthracite)).

WASTE CATEGORIES AND OUTPUT FLOWS PER m <sup>2</sup> 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 m<sup>2</sup> Cembrit Windstopper Basic).

ENVIRONMENTAL IMPACTS PER m <sup>2</sup> CEMBRIT WINDSTOPPER BASIC										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -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 <sub>2</sub> -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 <sub>4</sub> <sup>3-</sup> -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 m<sup>2</sup> Cembrit Windstopper Basic).

RESOURCE USE PER m <sup>2</sup> 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 <sup>3</sup> ]	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 m<sup>2</sup> Cembrit Windstopper Basic).

WASTE CATEGORIES AND OUTPUT FLOWS PER m <sup>2</sup> 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									

**Cembrit Construction**

The declared unit is for 1 m<sup>2</sup> of Cembrit 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 Cembrit Construction with a respective thickness of 6, 8 and 10 mm.

Table 10 – LCIA results for the declared unit (1 m<sup>2</sup> Cembrit Construction).

ENVIRONMENTAL IMPACTS PER M <sup>2</sup> CEMBRIT CONSTRUCTION										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -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 <sub>2</sub> -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 <sub>4</sub> <sup>3-</sup> -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 m<sup>2</sup> Cembrit Construction).

RESOURCE USE PER m <sup>2</sup> CEMBRIT 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 <sup>3</sup> ]	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 m<sup>2</sup> Cembrit Construction).

WASTE CATEGORIES AND OUTPUT FLOWS PER m <sup>2</sup> CEMBRIT 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									

**Cembrit Construction (Anthracite)**

The declared unit is for 1 m<sup>2</sup> of Cembrit Construction (Anthracite) with a thickness of 9 mm. A conversion factor 0.889 must be applied, when calculating results LCIA results for Cembrit Construction (Anthracite) with a thickness of 8 mm.

Table 13 – LCIA results for the declared unit (1 m<sup>2</sup> Cembrit Construction (Anthracite))

ENVIRONMENTAL IMPACTS PER M <sup>2</sup> CEMBRIT CONSTRUCTION (ANTHRACITE)										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -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 <sub>2</sub> -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 <sub>4</sub> <sup>3-</sup> -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 m<sup>2</sup> Cembrit Construction (Anthracite))

RESOURCE USE PER m <sup>2</sup> CEMBRIT 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 <sup>3</sup> ]	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 m<sup>2</sup> Cembrit Construction (Anthracite))

WASTE CATEGORIES AND OUTPUT FLOWS PER m <sup>2</sup> CEMBRIT 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									

**Cembrit Multi Force**

The declared unit is for 1 m<sup>2</sup> of Cembrit Multi Force with a thickness of 9 mm. A conversion factor 1,33 must be applied, when calculating results LCIA results for Cembrit Multi Force with a thickness of 12 mm.

Table 16 – LCIA results for the declared unit (1 m<sup>2</sup> Cembrit Multi Force)

ENVIRONMENTAL IMPACTS PER M <sup>2</sup> CEMBRIT MULTI FORCE										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -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 <sub>2</sub> -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 <sub>4</sub> <sup>3-</sup> -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 m<sup>2</sup> Cembrit Multi Force)

RESOURCE USE PER m <sup>2</sup> CEMBRIT 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 <sup>3</sup> ]	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 m<sup>2</sup> Cembrit Multi Force)

WASTE CATEGORIES AND OUTPUT FLOWS PER m <sup>2</sup> CEMBRIT 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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