

This appendix refers to the EPD MD-21033-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.

ENVIRONMENTAL IMPACTS PER m <sup>2</sup> installed roof waterproofing during 60 years																
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -eq.]	3,12E+00	4,20E-01	7,49E-01	0	0	0	3,22E+00	0	0	0	0,00E+00	7,92E-01	3,12E-01	1,01E-04	-4,43E-01
ODP	[kg CFC11-eq.]	5,98E-08	1,13E-16	8,43E-09	0	0	0	4,66E-08	0	0	0	0,00E+00	2,12E-16	1,05E-09	1,64E-11	-7,08E-08
AP	[kg SO <sub>2</sub> -eq.]	7,48E-03	9,53E-04	1,46E-03	0	0	0	7,20E-03	0	0	0	0,00E+00	1,80E-03	7,39E-05	7,43E-07	-1,06E-02
EP	[kg PO <sub>4</sub> <sup>3-</sup> -eq.]	1,12E-03	2,29E-04	2,39E-04	0	0	0	1,15E-03	0	0	0	0,00E+00	4,31E-04	2,82E-05	1,80E-07	1,89E-04
POCP	[kg ethene-eq.]	2,86E-03	-3,29E-04	4,16E-04	0	0	0	2,07E-03	0	0	0	0,00E+00	-6,21E-04	4,38E-06	8,82E-08	-8,62E-03
ADPE	[kg Sb-eq.]	2,77E-06	3,80E-08	4,13E-07	0	0	0	2,26E-06	0	0	0	0,00E+00	7,15E-08	1,21E-07	1,51E-10	2,91E-07
ADPF	[MJ]	1,55E+02	5,64E+00	2,65E+01	0	0	0	1,31E+02	0	0	0	0,00E+00	1,06E+01	6,29E-02	1,37E-03	-2,89E+02
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															

RESOURCE USE PER m <sup>2</sup> installed roof waterproofing during 60 years																
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	[MJ]	8,62E+00	3,28E-01	1,39E+00	0	0	0	8,01E+00	0	0	0	0,00E+00	6,17E-01	4,01E-03	1,06E-05	1,61E+01
PERM	[MJ]	1,95E-01	0,00E+00	2,69E-02	0	0	0	1,80E-01	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	8,81E+00	3,28E-01	1,42E+00	0	0	0	8,19E+00	0	0	0	0,00E+00	6,17E-01	4,01E-03	1,06E-05	1,61E+01
PENRE	[MJ]	2,78E+01	5,71E+00	8,42E+00	0	0	0	3,75E+01	0	0	0	0,00E+00	1,08E+01	6,73E-02	1,38E-03	-
PENRM	[MJ]	1,33E+02	0,00E+00	1,91E+01	0	0	0	9,95E+01	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,56E+02
PENRT	[MJ]	1,61E+02	5,71E+00	2,75E+01	0	0	0	1,37E+02	0	0	0	0,00E+00	1,08E+01	6,73E-02	1,38E-03	3,07E+02
SM	[kg]	1,02E+00	0,00E+00	1,43E-01	0	0	0	8,08E-01	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	[MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	[m <sup>3</sup> ]	9,80E-03	3,75E-04	1,72E-03	0	0	0	8,69E-03	0	0	0	0,00E+00	7,07E-04	2,75E-04	7,47E-08	-2,48E-03
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 = Use of net fresh water															

WASTE CATEGORIES AND OUTPUT FLOWS PER m <sup>2</sup> installed roof waterproofing during 60 years																
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	[kg]	8,43E-09	3,01E-10	1,45E-09	0	0	0	7,46E-09	0	0	0	0,00E+00	5,67E-10	1,40E-12	0,00E+00	2,36E-10
NHWD	[kg]	4,75E-02	8,97E-04	7,68E-03	0	0	0	4,59E-02	0	0	0	0,00E+00	1,69E-03	2,55E-04	0,00E+00	2,16E-03
RWD	[kg]	5,16E-04	1,04E-05	1,07E-04	0	0	0	4,78E-04	0	0	0	0,00E+00	1,95E-05	4,46E-07	0,00E+00	-3,36E-05
CRU	[kg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MFR	[kg]	0,00E+00	0,00E+00	9,13E-02	0	0	0	6,58E-02	0	0	0	0,00E+00	0,00E+00	8,71E+00	0,00E+00	0,00E+00
MER	[kg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EEE	[MJ]	0,00E+00	0,00E+00	4,08E-02	0	0	0	3,28E-02	0	0	0	0,00E+00	0,00E+00	5,45E-01	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	7,38E-02	0	0	0	5,93E-02	0	0	0	0,00E+00	0,00E+00	1,03E+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															

Checked and approved by



Linda Høiby  
Third party verifier of MD-21033-EN



Henrik Fred Larsen  
EPD Danmark