This appendix refers to the EPD MD-24190-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 1 m² of insulation material with thickness corresponding to R-value = 1m²K/W														
									Scenario 1			Scenario 2		
Parameter	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**	**C3**	**C4**	**D**
GWP	kg CO2-eq.	3,11E+00	1,87E-01	5,05E-01	7,32E-03	4,06E-02	0,00E+00	2,29E-03	6,07E-04	0,00E+00	-3,21E+00	0,00E+00	5,37E+00	-1,93E+00
ODP	kg CFC11-eq.	7,41E-11	2,86E-14	1,02E-09	1,12E-15	7,07E-15	0,00E+00	3,51E-16	2,79E-14	0,00E+00	-7,25E-12	0,00E+00	2,78E-13	-1,85E-11
AP	kg SO2-eq.	3,89E-03	1,71E-04	5,00E-04	7,65E-06	3,05E-06	0,00E+00	2,41E-06	2,68E-18	0,00E+00	-3,70E-03	0,00E+00	2,82E-04	-3,08E-03
EP	kg PO4(3-)-eq.	5,36E-04	3,63E-05	1,07E-04	1,67E-06	6,67E-07	0,00E+00	5,26E-07	6,30E-10	0,00E+00	-5,23E-04	0,00E+00	6,34E-05	-5,01E-04
POCP	kg ethene-eq	7,58E-04	1,57E-05	3,91E-02	6,16E-07	3,27E-07	0,00E+00	1,93E-07	7,00E-11	0,00E+00	-7,27E-04	0,00E+00	2,99E-05	-3,10E-04
ADPE	kg Sb-eq	1,20E-07	1,23E-08	2,50E-07	4,84E-10	6,85E-11	0,00E+00	1,51E-10	8,45E-14	0,00E+00	-1,22E-07	0,00E+00	2,44E-09	-1,96E-07
ADPF	MJ	1,14E+02	2,50E+00	7,79E+00	9,82E-02	1,46E-02	0,00E+00	3,07E-02	1,21E-10	0,00E+00	-1,13E+02	0,00E+00	4,84E-01	-2,19E+01
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													
	The numbers are declared in scientific notation, e.g., 1.95E+02. This number can also be written as: $1.95*10^{2}$ or 195, while 1.12E-11 is the same as $1.12*10^{-11}$ or 0.0000000000112.													

RESOURCE USE PER 1 m² of insulation material with thickness corresponding to R-value = 1m²K/W														
									Scenario 1			Scenario 2		
Parameter	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**	**C3**	**C4**	**D**
PERE	MJ	3,05E+00	1,85E-01	1,58E-01	7,26E-03	3,50E-03	0,00E+00	2,27E-03	2,10E-03	0,00E+00	-3,31E+00	0,00E+00	1,51E-01	-1,92E+01
PERM	MJ	4,60E-01	0,00E+00	-4,59E-01	0,00E+00	-1,64E-03	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	3,51E+00	1,85E-01	-3,01E-01	7,26E-03	1,86E-03	0,00E+00	2,27E-03	2,10E-03	0,00E+00	-3,31E+00	0,00E+00	1,51E-01	-1,92E+01
PENRE	MJ	1,16E+02	2,55E+00	1,28E+01	1,00E-01	1,62E-02	0,00E+00	3,13E-02	7,86E-03	0,00E+00	-1,16E+02	0,00E+00	5,93E-01	-3,05E+01
PENRM	MJ	5,99E+01	0,00E+00	7,97E-01	0,00E+00	-9,08E-01	0,00E+00	0,00E+00	-5,98E+01	0,00E+00	0,00E+00	0,00E+00	-5,98E+01	0,00E+00
PENRT	MJ	1,76E+02	2,55E+00	1,36E+01	1,00E-01	-8,91E-01	0,00E+00	3,13E-02	-5,98E+01	0,00E+00	-1,16E+02	0,00E+00	-5,92E+01	-3,05E+01
SM	kg	2,35E-02	0,00E+00	8,36E-05	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	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m3	1,61E-02	2,03E-04	4,80E-03	7,96E-06	8,69E-05	0,00E+00	2,49E-06	0,00E+00	0,00E+00	-1,70E-02	0,00E+00	1,02E-02	-1,17E-02
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													
	The numbers are declared in scientific notation, e.g., 1.95E+02. This number can also be written as: $1.95*10^{2}$ or 195, while 1.12E-11 is the same as $1.12*10^{-11}$ or 0.0000000000112.													

WASTE CATEGORIES AND OUTPUT FLOWS PER1 m² of insulation material with thickness corresponding to R-value = 1m²K/W														
									Scenario 1			Scenario 2		
Parameter	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**	**C3**	**C4**	**D**
HWD	kg	7,36E-09	7,91E-12	1,41E-10	3,10E-13	1,37E-13	0,00E+00	9,70E-14	0,00E+00	0,00E+00	-7,82E-09	0,00E+00	1,34E-11	-1,28E-09
NHWD	kg	2,66E-02	3,89E-04	5,19E-03	1,53E-05	2,56E-03	0,00E+00	4,77E-06	1,83E-16	0,00E+00	-2,88E-02	0,00E+00	1,94E-02	-5,80E-02
RWD	kg	3,83E-04	4,78E-06	2,12E-05	1,88E-07	5,32E-07	0,00E+00	5,86E-08	1,35E-08	0,00E+00	-4,28E-04	0,00E+00	3,57E-05	-2,81E-03
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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	0,00E+00	0,00E+00	2,00E-02	0,00E+00	7,49E-03	0,00E+00	0,00E+00	1,59E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	6,98E-02	0,00E+00	7,32E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,66E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	1,26E-01	0,00E+00	1,31E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,72E+01	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													
	The numbers are declared in scientific notation, e.g., 1.95E+02. This number can also be written as: $1.95*10^{2}$ or 195, while 1.12E-11 is the same as $1.12*10^{-11}$ or 0.0000000000112.													

Independent verification of the tool on which declaration and data is based, according to EN ISO 14025:2010.
Checked and approved by

David Althoff Palm
Third party verifier of MD-24190-EN

Martha Katrine Sørensen
EPD Danmark