This appendix refers to the EPD MD-24164-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.	1,07E+00	6,37E-02	1,72E-01	9,01E-04	1,38E-02	0,00E+00	2,82E-04	2,06E-04	0,00E+00	-1,09E+00	0,00E+00	1,83E+00	-6,58E-01
ODP	kg CFC11-eq.	2,52E-11	9,75E-15	3,48E-10	1,38E-16	2,40E-15	0,00E+00	4,32E-17	9,50E-15	0,00E+00	-2,47E-12	0,00E+00	9,45E-14	-6,28E-12
AP	kg SO2-eq.	1,37E-03	5,82E-05	1,70E-04	9,42E-07	1,04E-06	0,00E+00	2,97E-07	9,11E-19	0,00E+00	-1,26E-03	0,00E+00	9,60E-05	-1,05E-03
EP	kg PO4(3-)-eq.	1,80E-04	1,23E-05	3,63E-05	2,06E-07	2,27E-07	0,00E+00	6,49E-08	2,14E-10	0,00E+00	-1,78E-04	0,00E+00	2,16E-05	-1,71E-04
POCP	kg ethene-eq	2,59E-04	5,35E-06	1,25E-02	7,59E-08	1,11E-07	0,00E+00	2,37E-08	2,38E-11	0,00E+00	-2,47E-04	0,00E+00	1,02E-05	-1,06E-04
ADPE	kg Sb-eq	4,14E-08	4,20E-09	8,52E-08	5,96E-11	2,33E-11	0,00E+00	1,86E-11	2,87E-14	0,00E+00	-4,15E-08	0,00E+00	8,29E-10	-6,68E-08
ADPF	MJ	3,85E+01	8,53E-01	2,65E+00	1,21E-02	4,96E-03	0,00E+00	3,78E-03	4,10E-11	0,00E+00	-3,85E+01	0,00E+00	1,65E-01	-7,44E+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													
	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	1,08E+00	6,31E-02	5,38E-02	8,95E-04	1,19E-03	0,00E+00	2,80E-04	7,16E-04	0,00E+00	-1,13E+00	0,00E+00	5,14E-02	-6,52E+00
PERM	MJ	1,63E-01	0,00E+00	-1,63E-01	0,00E+00	-5,58E-04	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	1,24E+00	6,31E-02	-1,09E-01	8,95E-04	6,33E-04	0,00E+00	2,80E-04	7,16E-04	0,00E+00	-1,13E+00	0,00E+00	5,14E-02	-6,52E+00
PENRE	MJ	3,93E+01	8,70E-01	4,34E+00	1,23E-02	5,51E-03	0,00E+00	3,86E-03	2,67E-03	0,00E+00	-3,93E+01	0,00E+00	2,02E-01	-1,04E+01
PENRM	MJ	1,97E+01	0,00E+00	2,69E-01	0,00E+00	-3,09E-01	0,00E+00	0,00E+00	-1,97E+01	0,00E+00	0,00E+00	0,00E+00	-1,97E+01	0,00E+00
PENRT	MJ	5,90E+01	8,70E-01	4,61E+00	1,23E-02	-3,03E-01	0,00E+00	3,86E-03	-1,97E+01	0,00E+00	-3,93E+01	0,00E+00	-1,95E+01	-1,04E+01
SM	kg	8,33E-03	0,00E+00	2,84E-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	5,57E-03	6,91E-05	1,63E-03	9,80E-07	2,96E-05	0,00E+00	3,06E-07	0,00E+00	0,00E+00	-5,78E-03	0,00E+00	3,47E-03	-3,96E-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 = 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	2,42E-09	2,69E-12	4,79E-11	3,82E-14	4,68E-14	0,00E+00	1,19E-14	0,00E+00	0,00E+00	-2,66E-09	0,00E+00	4,55E-12	-4,34E-10
NHWD	kg	9,02E-03	1,33E-04	1,78E-03	1,88E-06	8,72E-04	0,00E+00	5,88E-07	6,23E-17	0,00E+00	-9,79E-03	0,00E+00	6,60E-03	-1,97E-02
RWD	kg	1,34E-04	1,63E-06	7,23E-06	2,31E-08	1,81E-07	0,00E+00	7,22E-09	4,61E-09	0,00E+00	-1,46E-04	0,00E+00	1,22E-05	-9,57E-04
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	7,11E-03	0,00E+00	2,55E-03	0,00E+00	0,00E+00	5,43E-01	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	2,48E-02	0,00E+00	2,49E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,29E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	4,46E-02	0,00E+00	4,45E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,86E+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													
	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-24164-EN

Martha Katrine Sørensen
EPD Danmark