This appendix refers to the EPD MD-24181-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.	1,00E+00	2,80E-02	2,41E-01	7,95E-04	1,07E-02	0,00E+00	2,48E-04	1,94E-04	0,00E+00	-1,02E+00	0,00E+00	1,72E+00	-6,16E-01
ODP	kg CFC11-eq.	2,37E-11	4,29E-15	1,97E-09	1,22E-16	1,44E-15	0,00E+00	3,80E-17	8,93E-15	0,00E+00	-2,32E-12	0,00E+00	8,88E-14	-5,91E-12
AP	kg SO2-eq.	1,29E-03	2,56E-05	4,05E-04	8,36E-07	8,96E-07	0,00E+00	2,61E-07	8,56E-19	0,00E+00	-1,18E-03	0,00E+00	9,02E-05	-9,82E-04
EP	kg PO4(3-)-eq.	1,69E-04	5,43E-06	1,61E-04	1,83E-07	1,95E-07	0,00E+00	5,71E-08	2,01E-10	0,00E+00	-1,67E-04	0,00E+00	2,03E-05	-1,60E-04
POCP	kg ethene-eq	2,44E-04	2,35E-06	1,17E-02	6,69E-08	9,66E-08	0,00E+00	2,09E-08	2,24E-11	0,00E+00	-2,32E-04	0,00E+00	9,56E-06	-9,88E-05
ADPE	kg Sb-eq	3,89E-08	1,85E-09	1,40E-07	5,25E-11	2,26E-11	0,00E+00	1,64E-11	2,70E-14	0,00E+00	-3,88E-08	0,00E+00	7,79E-10	-6,26E-08
ADPF	MJ	3,62E+01	3,75E-01	3,67E+00	1,07E-02	4,88E-03	0,00E+00	3,33E-03	3,86E-11	0,00E+00	-3,61E+01	0,00E+00	1,55E-01	-6,93E+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	1,01E+00	2,77E-02	2,27E-01	7,89E-04	1,16E-03	0,00E+00	2,46E-04	6,73E-04	0,00E+00	-1,05E+00	0,00E+00	4,83E-02	-6,12E+00
PERM	MJ	1,54E-01	0,00E+00	-1,53E-01	0,00E+00	-4,24E-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	1,17E+00	2,77E-02	7,40E-02	7,89E-04	7,37E-04	0,00E+00	2,46E-04	6,73E-04	0,00E+00	-1,05E+00	0,00E+00	4,83E-02	-6,12E+00
PENRE	MJ	3,70E+01	3,83E-01	4,36E+00	1,09E-02	5,40E-03	0,00E+00	3,39E-03	2,51E-03	0,00E+00	-3,69E+01	0,00E+00	1,90E-01	-9,69E+00
PENRM	MJ	1,85E+01	0,00E+00	2,09E-01	0,00E+00	-2,46E-01	0,00E+00	0,00E+00	-1,85E+01	0,00E+00	0,00E+00	0,00E+00	-1,85E+01	0,00E+00
PENRT	MJ	5,55E+01	3,83E-01	4,57E+00	1,09E-02	-2,41E-01	0,00E+00	3,39E-03	-1,85E+01	0,00E+00	-3,69E+01	0,00E+00	-1,83E+01	-9,69E+00
SM	kg	7,83E-03	0,00E+00	1,48E-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	5,24E-03	3,04E-05	3,01E-03	8,64E-07	2,41E-05	0,00E+00	2,70E-07	0,00E+00	0,00E+00	-5,42E-03	0,00E+00	3,26E-03	-3,71E-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	2,28E-09	1,18E-12	4,30E-11	3,37E-14	3,98E-14	0,00E+00	1,05E-14	0,00E+00	0,00E+00	-2,50E-09	0,00E+00	4,28E-12	-4,04E-10
NHWD	kg	8,48E-03	5,83E-05	2,19E-03	1,66E-06	9,67E-04	0,00E+00	5,18E-07	5,86E-17	0,00E+00	-9,17E-03	0,00E+00	6,21E-03	-1,85E-02
RWD	kg	1,26E-04	7,16E-07	6,81E-06	2,04E-08	1,71E-07	0,00E+00	6,35E-09	4,33E-09	0,00E+00	-1,35E-04	0,00E+00	1,14E-05	-8,98E-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	6,69E-03	0,00E+00	1,68E-03	0,00E+00	0,00E+00	5,10E-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	2,33E-02	0,00E+00	1,94E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,09E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	4,19E-02	0,00E+00	3,46E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,51E+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-24181-EN

Martha Katrine Sørensen
EPD Danmark