This appendix refers to the EPD MD-24159-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	6,46E-02	1,74E-01	7,58E-04	1,40E-02	0,00E+00	2,37E-04	2,09E-04	0,00E+00	-1,11E+00	0,00E+00	1,86E+00	-6,68E-01
ODP	kg CFC11-eq.	2,56E-11	9,88E-15	3,54E-10	1,16E-16	2,44E-15	0,00E+00	3,63E-17	9,64E-15	0,00E+00	-2,50E-12	0,00E+00	9,59E-14	-6,37E-12
AP	kg SO2-eq.	1,34E-03	5,90E-05	1,73E-04	7,92E-07	1,05E-06	0,00E+00	2,49E-07	9,24E-19	0,00E+00	-1,28E-03	0,00E+00	9,74E-05	-1,06E-03
EP	kg PO4(3-)-eq.	1,85E-04	1,25E-05	3,69E-05	1,73E-07	2,30E-07	0,00E+00	5,45E-08	2,17E-10	0,00E+00	-1,81E-04	0,00E+00	2,19E-05	-1,73E-04
POCP	kg ethene-eq	2,62E-04	5,42E-06	1,35E-02	6,38E-08	1,13E-07	0,00E+00	1,99E-08	2,42E-11	0,00E+00	-2,51E-04	0,00E+00	1,03E-05	-1,07E-04
ADPE	kg Sb-eq	4,13E-08	4,26E-09	8,64E-08	5,01E-11	2,36E-11	0,00E+00	1,57E-11	2,92E-14	0,00E+00	-4,21E-08	0,00E+00	8,42E-10	-6,78E-08
ADPF	MJ	3,93E+01	8,64E-01	2,69E+00	1,02E-02	5,03E-03	0,00E+00	3,18E-03	4,16E-11	0,00E+00	-3,91E+01	0,00E+00	1,67E-01	-7,55E+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	1,05E+00	6,39E-02	5,45E-02	7,52E-04	1,21E-03	0,00E+00	2,35E-04	7,26E-04	0,00E+00	-1,14E+00	0,00E+00	5,22E-02	-6,62E+00
PERM	MJ	1,59E-01	0,00E+00	-1,58E-01	0,00E+00	-5,66E-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	1,21E+00	6,39E-02	-1,04E-01	7,52E-04	6,43E-04	0,00E+00	2,35E-04	7,26E-04	0,00E+00	-1,14E+00	0,00E+00	5,22E-02	-6,62E+00
PENRE	MJ	4,01E+01	8,82E-01	4,40E+00	1,04E-02	5,60E-03	0,00E+00	3,24E-03	2,71E-03	0,00E+00	-3,99E+01	0,00E+00	2,05E-01	-1,05E+01
PENRM	MJ	2,07E+01	0,00E+00	2,75E-01	0,00E+00	-3,13E-01	0,00E+00	0,00E+00	-2,07E+01	0,00E+00	0,00E+00	0,00E+00	-2,07E+01	0,00E+00
PENRT	MJ	6,08E+01	8,82E-01	4,68E+00	1,04E-02	-3,08E-01	0,00E+00	3,24E-03	-2,07E+01	0,00E+00	-3,99E+01	0,00E+00	-2,05E+01	-1,05E+01
SM	kg	8,11E-03	0,00E+00	2,89E-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	5,56E-03	7,00E-05	1,66E-03	8,24E-07	3,00E-05	0,00E+00	2,57E-07	0,00E+00	0,00E+00	-5,87E-03	0,00E+00	3,52E-03	-4,02E-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	2,54E-09	2,73E-12	4,86E-11	3,21E-14	4,75E-14	0,00E+00	1,00E-14	0,00E+00	0,00E+00	-2,70E-09	0,00E+00	4,62E-12	-4,40E-10
NHWD	kg	9,20E-03	1,34E-04	1,79E-03	1,58E-06	8,85E-04	0,00E+00	4,94E-07	6,33E-17	0,00E+00	-9,94E-03	0,00E+00	6,70E-03	-2,00E-02
RWD	kg	1,32E-04	1,65E-06	7,33E-06	1,94E-08	1,84E-07	0,00E+00	6,07E-09	4,68E-09	0,00E+00	-1,48E-04	0,00E+00	1,23E-05	-9,71E-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	6,92E-03	0,00E+00	2,59E-03	0,00E+00	0,00E+00	5,51E-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	2,41E-02	0,00E+00	2,53E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,34E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	4,34E-02	0,00E+00	4,52E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,94E+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-24159-EN

Martha Katrine Sørensen
EPD Danmark