LCA Results acc. EN15804+A1:2013
Appendix for MD-24158-EN
Valid to: 2029-11-13
Created with the Sunde EPD Tool (Tool ID:T24003, Version 1)

This appendix refers to the EPD MD-24158-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	6,04E-02	1,63E-01	6,15E-04	1,31E-02	0,00E+00	1,92E-04	1,96E-04	0,00E+00	-1,04E+00	0,00E+00	1,74E+00	-6,25E-01
ODP	kg CFC11-eq.	2,39E-11	9,25E-15	3,31E-10	9,44E-17	2,28E-15	0,00E+00	2,95E-17	9,03E-15	0,00E+00	-2,34E-12	0,00E+00	8,98E-14	-5,97E-12
AP	kg SO2-eq.	1,26E-03	5,52E-05	1,62E-04	6,43E-07	9,84E-07	0,00E+00	2,02E-07	8,65E-19	0,00E+00	-1,20E-03	0,00E+00	9,12E-05	-9,95E-04
EP	kg PO4(3-)-eq.	1,73E-04	1,17E-05	3,45E-05	1,40E-07	2,16E-07	0,00E+00	4,43E-08	2,03E-10	0,00E+00	-1,69E-04	0,00E+00	2,05E-05	-1,62E-04
POCP	kg ethene-eq	2,45E-04	5,08E-06	1,26E-02	5,18E-08	1,06E-07	0,00E+00	1,62E-08	2,26E-11	0,00E+00	-2,35E-04	0,00E+00	9,66E-06	-1,00E-04
ADPE	kg Sb-eq	3,87E-08	3,98E-09	8,09E-08	4,07E-11	2,21E-11	0,00E+00	1,27E-11	2,73E-14	0,00E+00	-3,94E-08	0,00E+00	7,88E-10	-6,34E-08
ADPF	MJ	3,68E+01	8,09E-01	2,52E+00	8,26E-03	4,71E-03	0,00E+00	2,58E-03	3,90E-11	0,00E+00	-3,66E+01	0,00E+00	1,56E-01	-7,07E+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	9,87E-01	5,98E-02	5,10E-02	6,11E-04	1,13E-03	0,00E+00	1,91E-04	6,80E-04	0,00E+00	-1,07E+00	0,00E+00	4,88E-02	-6,20E+00
PERM	MJ	1,49E-01	0,00E+00	-1,48E-01	0,00E+00	-5,30E-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	1,14E+00	5,98E-02	-9,72E-02	6,11E-04	6,02E-04	0,00E+00	1,91E-04	6,80E-04	0,00E+00	-1,07E+00	0,00E+00	4,88E-02	-6,20E+00
PENRE	MJ	3,75E+01	8,25E-01	4,12E+00	8,42E-03	5,24E-03	0,00E+00	2,63E-03	2,54E-03	0,00E+00	-3,74E+01	0,00E+00	1,92E-01	-9,85E+00
PENRM	MJ	1,94E+01	0,00E+00	2,57E-01	0,00E+00	-2,93E-01	0,00E+00	0,00E+00	-1,93E+01	0,00E+00	0,00E+00	0,00E+00	-1,93E+01	0,00E+00
PENRT	MJ	5,69E+01	8,25E-01	4,38E+00	8,42E-03	-2,88E-01	0,00E+00	2,63E-03	-1,93E+01	0,00E+00	-3,74E+01	0,00E+00	-1,91E+01	-9,85E+00
SM	kg	7,59E-03	0,00E+00	2,70E-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	5,20E-03	6,55E-05	1,55E-03	6,69E-07	2,81E-05	0,00E+00	2,09E-07	0,00E+00	0,00E+00	-5,49E-03	0,00E+00	3,30E-03	-3,77E-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	2,38E-09	2,56E-12	4,55E-11	2,61E-14	4,44E-14	0,00E+00	8,15E-15	0,00E+00	0,00E+00	-2,53E-09	0,00E+00	4,33E-12	-4,12E-10
NHWD	kg	8,61E-03	1,26E-04	1,68E-03	1,28E-06	8,28E-04	0,00E+00	4,01E-07	5,92E-17	0,00E+00	-9,30E-03	0,00E+00	6,27E-03	-1,88E-02
RWD	kg	1,24E-04	1,54E-06	6,86E-06	1,58E-08	1,72E-07	0,00E+00	4,93E-09	4,38E-09	0,00E+00	-1,38E-04	0,00E+00	1,15E-05	-9,09E-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	6,48E-03	0,00E+00	2,42E-03	0,00E+00	0,00E+00	5,15E-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	2,26E-02	0,00E+00	2,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	4,06E-02	0,00E+00	4,23E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,56E+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-24158-EN

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