

This appendix refers to the EPD MD-24199-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 m ³ of insulation material with λ-value = 0,034W/mK														
Parameter	Unit						Scenario 1					Scenario 2		
		A1	A2	A3	A4	A5	C1	C2	C3	C4	D	C3	C4	D
GWP	kg CO ₂ -eq.	6,04E+01	3,52E+00	2,06E+01	2,29E-01	3,63E+01	0,00E+00	2,85E-02	1,18E-02	0,00E+00	-6,26E+01	0,00E+00	1,04E+02	-3,79E+01
ODP	kg CFC11-eq.	1,44E-09	5,38E-13	6,82E-08	3,52E-14	3,78E-13	0,00E+00	4,38E-15	5,43E-13	0,00E+00	-1,42E-10	0,00E+00	5,40E-12	-3,60E-10
AP	kg SO ₂ -eq.	7,57E-02	3,21E-03	5,89E-02	2,40E-04	3,80E-04	0,00E+00	3,00E-05	5,20E-17	0,00E+00	-7,23E-02	0,00E+00	5,48E-03	-6,02E-02
EP	kg PO ₄ (3-)-eq.	1,04E-02	6,82E-04	1,14E-02	5,23E-05	7,61E-05	0,00E+00	6,57E-06	1,22E-08	0,00E+00	-1,02E-02	0,00E+00	1,23E-03	-9,82E-03
POCP	kg ethene-eq.	1,47E-02	2,95E-04	7,69E-01	1,93E-05	3,38E-05	0,00E+00	2,40E-06	1,36E-09	0,00E+00	-1,42E-02	0,00E+00	5,81E-04	-6,08E-03
ADPE	kg Sb-eq.	2,33E-06	2,32E-07	1,73E-05	1,52E-08	1,43E-08	0,00E+00	1,89E-09	1,64E-12	0,00E+00	-2,39E-06	0,00E+00	4,74E-08	-3,83E-06
ADPF	MJ	2,21E+03	4,71E+01	7,81E+02	3,08E+00	2,92E+00	0,00E+00	3,83E-01	2,34E-09	0,00E+00	-2,20E+03	0,00E+00	9,41E+00	-4,29E+02
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 m ³ of insulation material with λ-value = 0,034W/mK														
Parameter	Unit						Scenario 1					Scenario 2		
		A1	A2	A3	A4	A5	C1	C2	C3	C4	D	C3	C4	D
PERE	MJ	5,94E+01	3,48E+00	2,43E+01	2,28E-01	3,45E-01	0,00E+00	2,83E-02	4,09E-02	0,00E+00	-6,66E+01	0,00E+00	2,94E+00	-3,75E+02
PERM	MJ	8,95E+00	0,00E+00	7,96E+00	0,00E+00	-1,69E+01	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	6,83E+01	3,48E+00	3,22E+01	2,28E-01	-1,66E+01	0,00E+00	2,83E-02	4,09E-02	0,00E+00	-6,66E+01	0,00E+00	2,94E+00	-3,75E+02
PENRE	MJ	2,26E+03	4,80E+01	1,13E+03	3,14E+00	3,07E+00	0,00E+00	3,91E-01	1,53E-01	0,00E+00	-2,25E+03	0,00E+00	1,15E+01	-5,97E+02
PENRM	MJ	1,17E+03	0,00E+00	1,86E+01	0,00E+00	-2,08E+01	0,00E+00	0,00E+00	-1,16E+03	0,00E+00	0,00E+00	0,00E+00	-1,16E+03	0,00E+00
PENRT	MJ	3,42E+03	4,80E+01	1,15E+03	3,14E+00	-1,77E+01	0,00E+00	3,91E-01	-1,16E+03	0,00E+00	-2,25E+03	0,00E+00	-1,15E+03	-5,97E+02
SM	kg	4,56E-01	0,00E+00	2,03E+01	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	m ³	3,13E-01	3,81E-03	3,86E-01	2,49E-04	5,61E-03	0,00E+00	3,10E-05	0,00E+00	0,00E+00	-3,31E-01	0,00E+00	1,98E-01	-2,27E-01
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 PER 1 m ³ of insulation material with λ-value = 0,034W/mK														
Parameter	Unit						Scenario 1					Scenario 2		
		A1	A2	A3	A4	A5	C1	C2	C3	C4	D	C3	C4	D
HWD	kg	1,43E-07	1,49E-10	7,58E-09	9,72E-12	1,80E-11	0,00E+00	1,21E-12	0,00E+00	0,00E+00	-1,52E-07	0,00E+00	2,60E-10	-2,52E-08
NHWD	kg	5,18E-01	7,32E-03	4,24E-01	4,79E-04	1,03E-01	0,00E+00	5,95E-05	3,56E-15	0,00E+00	-5,69E-01	0,00E+00	3,77E-01	-1,14E+00
RWD	kg	7,45E-03	8,99E-05	1,69E-03	5,88E-06	3,72E-05	0,00E+00	7,31E-07	2,63E-07	0,00E+00	-8,40E-03	0,00E+00	6,94E-04	-5,48E-02
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	3,90E-01	0,00E+00	2,05E+01	0,00E+00	0,00E+00	3,10E+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	1,36E+00	0,00E+00	3,42E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,88E+02	0,00E+00
EET	MJ	0,00E+00	0,00E+00	2,44E+00	0,00E+00	6,14E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,35E+02	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-24199-EN

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