This appendix refers to the EPD MD-23198-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 30-meter Retro Zinc Rain Gutter System with RSL of 40 years											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP	[kg CO_2-eq.]	2.31E+02	7.69E-01	1.85E+01	3.48E-03	0.00E+00	0.00E+00	4.67E-01	2.91E-01	0.00E+00	-1.81E+02
ODP	[kg CFC11-eq.]	2.01E-07	1.35E-13	1.22E-13	2.03E-14	0.00E+00	0.00E+00	8.21E-14	2.03E-09	0.00E+00	-3.03E-09
AP	[kg SO_2-eq.]	9.56E-01	8.26E-04	1.40E-04	4.23E-06	0.00E+00	0.00E+00	5.02E-04	4.71E-04	0.00E+00	-7.53E-01
EP	[kg PO_4^{3-}-eq.]	1.44E-01	1.92E-04	3.11E-05	3.81E-06	0.00E+00	0.00E+00	1.16E-04	6.85E-05	0.00E+00	-8.82E-02
POCP	[kg ethene-eq.]	7.17E-02	1.08E-04	1.59E-05	4.68E-07	0.00E+00	0.00E+00	6.58E-05	4.34E-05	0.00E+00	-5.43E-02
ADPE	[kg Sb-eq.]	1.04E-01	6.77E-08	6.67E-09	2.00E-10	0.00E+00	0.00E+00	4.11E-08	5.95E-08	0.00E+00	-8.80E-02
ADPF	[MJ]	2.50E+03	1.01E+01	9.69E-01	4.26E-02	0.00E+00	0.00E+00	6.12E+00	3.25E+00	0.00E+00	-1.69E+03
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 30-meter Retro Zinc Rain Gutter System with RSL of 40 years											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1.42E+03	8.85E-01	1.34E-01	9.88E-03	0.00E+00	0.00E+00	5.37E-01	4.28E+00	0.00E+00	-1.19E+03
PERM	[MJ]	1.05E+01	0.00E+00	-1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	1.43E+03	8.85E-01	-1.04E+01	9.88E-03	0.00E+00	0.00E+00	5.37E-01	4.28E+00	0.00E+00	-1.19E+03
PENRE	[MJ]	3.58E+03	1.03E+01	1.02E+00	4.72E-02	0.00E+00	0.00E+00	6.24E+00	6.02E+00	0.00E+00	-2.57E+03
PENRM	[MJ]	1.31E+01	0.00E+00	-1.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	3.59E+03	1.03E+01	-1.20E+01	4.72E-02	0.00E+00	0.00E+00	6.24E+00	6.02E+00	0.00E+00	-2.57E+03
SM	[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
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
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
FW	[m^3]	3.14E+00	9.86E-04	2.09E-03	4.01E-02	0.00E+00	0.00E+00	5.99E-04	3.62E-03	0.00E+00	-2.44E+00
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 30-meter Retro Zinc Rain Gutter System with RSL of 40 years											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	6.35E-01	3.93E-10	1.56E-10	2.12E-11	0.00E+00	0.00E+00	2.39E-10	8.53E-09	0.00E+00	-2.40E-03
NHWD	[kg]	9.60E+01	1.68E-03	7.09E-03	1.14E-02	0.00E+00	0.00E+00	1.02E-03	4.88E-03	0.00E+00	-8.14E+01
RWD	[kg]	3.27E-01	1.87E-05	1.39E-05	1.46E-06	0.00E+00	0.00E+00	1.14E-05	9.69E-04	0.00E+00	-2.77E-01
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
MFR	[kg]	1.40E+01	0.00E+00	5.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E+01	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
EEE	[MJ]	0.00E+00	0.00E+00	1.77E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	3.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+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.										

Checked and approved by

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