

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 PVC Rain Gutter System with RSL of 30 years											
Parameter	Unit	A1-A3	A4	A5	B2	B1, B3-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ -eq.]	3.87E+01	1.28E+00	1.94E+01	4.55E-03	0.00E+00	0.00E+00	1.58E-01	3.65E+01	1.77E-02	-2.80E+01
ODP	[kg CFC11-eq.]	3.97E-08	1.99E-13	1.18E-13	2.78E-14	0.00E+00	0.00E+00	2.48E-14	3.17E-11	6.71E-11	-1.91E-09
AP	[kg SO ₂ -eq.]	6.75E-02	1.32E-03	1.51E-04	6.50E-06	0.00E+00	0.00E+00	1.64E-04	5.74E-03	1.36E-05	-3.59E-02
EP	[kg PO ₄ ³⁻ -eq.]	1.71E-02	2.87E-04	3.18E-05	5.74E-06	0.00E+00	0.00E+00	3.56E-05	1.18E-03	8.79E-04	-6.42E-03
POCP	[kg ethene-eq.]	2.06E-02	0.00E+00	1.90E-06	6.15E-07	0.00E+00	0.00E+00	0.00E+00	6.64E-04	5.73E-06	-7.86E-03
ADPE	[kg Sb-eq.]	1.09E-05	8.59E-08	5.31E-09	2.36E-10	0.00E+00	0.00E+00	1.07E-08	2.47E-07	5.55E-09	-2.26E-06
ADPF	[MJ]	1.44E+03	1.75E+01	1.04E+00	6.45E-02	0.00E+00	0.00E+00	2.17E+00	5.41E+01	6.26E-02	-5.55E+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 30-meter PVC Rain Gutter System with RSL of 30 years											
Parameter	Unit	A1-A3	A4	A5	B2	B1, B3-B7	C1	C2	C3	C4	D
PERE	[MJ]	2.19E+02	1.29E+00	1.25E-01	1.36E-02	0.00E+00	0.00E+00	1.60E-01	1.41E+01	2.77E-03	-1.73E+02
PERM	[MJ]	1.98E+02	0.00E+00	-1.98E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	4.17E+02	1.29E+00	-1.98E+02	1.36E-02	0.00E+00	0.00E+00	1.60E-01	1.41E+01	2.77E-03	-1.73E+02
PENRE	[MJ]	1.53E+03	1.78E+01	1.10E+00	7.18E-02	0.00E+00	0.00E+00	2.21E+00	5.93E+01	5.11E+00	-6.29E+02
PENRM	[MJ]	5.05E+02	0.00E+00	-8.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.99E+02	-5.04E+00	0.00E+00
PENRT	[MJ]	2.04E+03	1.78E+01	2.32E-01	7.18E-02	0.00E+00	0.00E+00	2.21E+00	-4.40E+02	6.52E-02	-6.29E+02
SM	[kg]	1.06E+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
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]	2.89E-01	1.41E-03	2.39E-03	6.01E-02	0.00E+00	0.00E+00	1.76E-04	9.17E-02	7.94E-05	-1.43E-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 30-meter PVC Rain Gutter System with RSL of 30 years											
Parameter	Unit	A1-A3	A4	A5	B2	B1, B3-B7	C1	C2	C3	C4	D
HWD	[kg]	3.09E-05	5.51E-11	4.27E-12	2.71E-12	0.00E+00	0.00E+00	6.84E-12	1.43E-10	0.00E+00	-9.80E-06
NHWD	[kg]	6.76E-01	2.71E-03	9.67E-03	1.71E-02	0.00E+00	0.00E+00	3.37E-04	1.57E+01	0.00E+00	-5.17E-01
RWD	[kg]	2.91E-02	3.33E-05	1.61E-05	2.38E-06	0.00E+00	0.00E+00	4.14E-06	1.74E-03	7.62E-21	-2.38E-02

CRU	[kg]	0.00E+00	0.00E+00	1.06E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	3.93E-01	0.00E+00	5.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E+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
EEE	[MJ]	0.00E+00	0.00E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E+01	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	3.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E+01	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										
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Checked and approved by

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