Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.80

Product:	3004594 - PVC Hanging Gutter GY PVC 5"Endcap Right
Unit:	1 piece
Manufacturer:	Wavin - PL -Buk - Extra products

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	08-06-2023
End of validity:	08-06-2028
Verifier:	Martijn van Hövell - SGS Search

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - PL -Buk - Extra products (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.16E-1	1.48E-3	1.45E-4	1.18E-1	1.66E-3	8.85E-2	5.29E-4	-7.88E-2	1.29E-1
GWP-f	kg CO2 eq	1.48E-1	1.48E-3	1.46E-4	1.49E-1	1.65E-3	5.42E-2	5.29E-4	-8.07E-2	1.25E-1
GWP-b	kg CO2 eq	-3.20E-2	8.97E-7	-1.54E-6	-3.20E-2	1.00E-6	3.44E-2	6.62E-7	2.00E-3	4.33E-3
GWP-luluc	kg CO2 eq	1.50E-4	5.23E-7	1.49E-7	1.50E-4	5.86E-7	2.08E-5	1.41E-8	-7.92E-5	9.25E-5
ODP	kg CFC11 eq	7.14E-8	3.40E-10	8.26E-12	7.18E-8	3.81E-10	5.73E-9	1.96E-11	-3.68E-8	4.12E-8
AP	mol H+ eq	7.03E-4	8.41E-6	1.47E-6	7.13E-4	9.42E-6	9.83E-5	4.78E-7	-3.12E-4	5.09E-4
EP-fw	kg P eq	6.61E-6	1.21E-8	8.24E-9	6.63E-6	1.36E-8	6.94E-7	6.33E-10	-3.04E-6	4.30E-6
EP-m	kg N eq	1.24E-4	3.01E-6	1.55E-7	1.27E-4	3.37E-6	2.42E-5	2.94E-7	-5.81E-5	9.71E-5
EP-T	mol N eq	1.36E-3	3.32E-5	1.85E-6	1.39E-3	3.72E-5	2.67E-4	1.90E-6	-6.30E-4	1.07E-3
POCP	kg NMVOC eq	4.58E-4	9.48E-6	6.28E-7	4.68E-4	1.06E-5	7.97E-5	6.56E-7	-2.17E-4	3.42E-4
ADP-mm	kg Sb eq	1.00E-4	3.82E-8	1.97E-8	1.00E-4	4.28E-8	3.84E-7	4.82E-10	-1.54E-6	9.91E-5
ADP-f	MJ	3.59E+0	2.27E-2	1.36E-3	3.61E+0	2.54E-2	2.64E-1	1.43E-3	-1.89E+0	2.01E+0
WDP	m3 depriv.	2.21E-1	6.96E-5	5.22E-5	2.22E-1	7.79E-5	1.04E-2	1.02E-5	-1.07E-1	1.25E-1
PM	disease inc.	5.19E-9	1.33E-10	9.08E-12	5.34E-9	1.49E-10	1.21E-9	9.87E-12	-2.54E-9	4.17E-9
IR	kBq U-235 eq	7.77E-3	9.91E-5	1.02E-6	7.87E-3	1.11E-4	9.35E-4	6.57E-6	-3.68E-3	5.24E-3
ETP-fw	CTUe	3.66E+0	1.84E-2	1.21E-2	3.69E+0	2.06E-2	2.04E+0	2.25E-2	-1.31E+0	4.47E+0
HTP-c	CTUh	1.24E-10	6.55E-13	6.17E-13	1.26E-10	7.34E-13	3.10E-11	4.03E-14	-5.11E-11	1.06E-10
HTP-nc	CTUh	3.68E-9	2.19E-11	1.57E-11	3.72E-9	2.46E-11	7.16E-10	4.33E-12	-1.45E-9	3.02E-9
SQP	Pt	3.37E+0	1.94E-2	2.24E-3	3.39E+0	2.17E-2	1.63E-1	3.67E-3	-2.97E+0	6.06E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.83E-1	3.25E-4	2.40E-2	8.08E-1	3.64E-4	1.91E-2	5.30E-5	-5.06E-1	3.22E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.83E-1	3.25E-4	2.40E-2	8.08E-1	3.64E-4	1.91E-2	5.30E-5	-5.06E-1	3.22E-1
PENRE	MJ	3.85E+0	2.41E-2	1.44E-3	3.87E+0	2.70E-2	2.81E-1	1.52E-3	-2.04E+0	2.14E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.85E+0	2.41E-2	1.44E-3	3.87E+0	2.70E-2	2.81E-1	1.52E-3	-2.04E+0	2.14E+0
PET	MJ	4.63E+0	2.44E-2	2.55E-2	4.68E+0	2.73E-2	3.00E-1	1.57E-3	-2.55E+0	2.47E+0
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	2.59E-3	2.56E-6	1.46E-6	2.59E-3	2.87E-6	2.87E-4	1.75E-6	-1.20E-3	1.68E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.51E-5	5.80E-8	2.73E-13	1.52E-5	6.49E-8	4.33E-7	1.75E-9	-1.73E-6	1.40E-5
NHWD	kg	1.55E-2	1.40E-3	1.05E-6	1.70E-2	1.57E-3	9.96E-3	6.29E-3	-6.96E-3	2.78E-2
RWD	kg	6.88E-6	1.54E-7	1.10E-13	7.04E-6	1.73E-7	1.00E-6	9.31E-9	-3.33E-6	4.89E-6
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0

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