Environmental Profile

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

Ecochain v3.5.80

Product:	3043727 - Rainwater adap. KANION PVC90/110 graph.
Unit:	1 piece
Manufacturer:	Wavin - PL -Buk - Extra products

Kanion gutters mean original design, elegance and aesthetics. They are designed to drain 100% of rainwater. It is safe to say that they are intended for the most demanding users.

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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.34E-1	5.64E-3	1.45E-4	3.40E-1	3.66E-3	2.21E-1	1.18E-3	-1.75E-1	3.92E-1
GWP-f	kg CO2 eq	3.97E-1	5.64E-3	1.46E-4	4.03E-1	3.65E-3	1.40E-1	1.18E-3	-2.08E-1	3.40E-1
GWP-b	kg CO2 eq	-6.34E-2	3.42E-6	-1.54E-6	-6.34E-2	2.22E-6	8.17E-2	1.45E-6	3.36E-2	5.18E-2
GWP-luluc	kg CO2 eq	5.28E-4	2.00E-6	1.49E-7	5.30E-4	1.29E-6	4.61E-5	3.23E-8	-3.72E-4	2.06E-4
ODP	kg CFC11 eq	1.57E-7	1.30E-9	8.26E-12	1.58E-7	8.42E-10	1.28E-8	4.34E-11	-8.44E-8	8.78E-8
AP	mol H+ eq	1.96E-3	3.21E-5	1.47E-6	2.00E-3	2.08E-5	2.33E-4	1.06E-6	-8.46E-4	1.41E-3
EP-fw	kg P eq	1.83E-5	4.64E-8	8.24E-9	1.84E-5	3.01E-8	1.55E-6	1.44E-9	-9.37E-6	1.06E-5
EP-m	kg N eq	3.71E-4	1.15E-5	1.55E-7	3.83E-4	7.45E-6	5.99E-5	6.42E-7	-1.64E-4	2.87E-4
EP-T	mol N eq	3.99E-3	1.27E-4	1.85E-6	4.12E-3	8.21E-5	6.60E-4	4.22E-6	-1.80E-3	3.06E-3
POCP	kg NMVOC eq	1.30E-3	3.62E-5	6.28E-7	1.34E-3	2.35E-5	1.97E-4	1.46E-6	-5.96E-4	9.65E-4
ADP-mm	kg Sb eq	3.47E-4	1.46E-7	1.97E-8	3.47E-4	9.46E-8	9.11E-7	1.08E-9	-3.59E-6	3.45E-4
ADP-f	MJ	9.02E+0	8.66E-2	1.36E-3	9.11E+0	5.61E-2	6.11E-1	3.18E-3	-4.65E+0	5.13E+0
WDP	m3 depriv.	5.08E-1	2.66E-4	5.22E-5	5.08E-1	1.72E-4	2.28E-2	2.68E-5	-2.80E-1	2.51E-1
PM	disease inc.	1.61E-8	5.09E-10	9.08E-12	1.66E-8	3.30E-10	2.92E-9	2.19E-11	-8.50E-9	1.14E-8
IR	kBq U-235 eq	1.93E-2	3.78E-4	1.02E-6	1.97E-2	2.45E-4	2.18E-3	1.45E-5	-9.88E-3	1.23E-2
ETP-fw	CTUe	1.38E+1	7.03E-2	1.21E-2	1.38E+1	4.56E-2	4.43E+0	4.81E-2	-5.21E+0	1.32E+1
HTP-c	CTUh	4.11E-10	2.50E-12	6.17E-13	4.15E-10	1.62E-12	7.67E-11	9.20E-14	-1.29E-10	3.64E-10
HTP-nc	CTUh	1.07E-8	8.38E-11	1.57E-11	1.08E-8	5.43E-11	1.63E-9	9.32E-12	-2.96E-9	9.52E-9
SQP	Pt	8.25E+0	7.41E-2	2.24E-3	8.32E+0	4.80E-2	3.80E-1	8.11E-3	-1.13E+1	-2.54E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.40E+0	1.24E-3	2.40E-2	2.43E+0	8.05E-4	4.25E-2	1.15E-4	-1.99E+0	4.81E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.40E+0	1.24E-3	2.40E-2	2.43E+0	8.05E-4	4.25E-2	1.15E-4	-1.99E+0	4.81E-1
PENRE	MJ	9.68E+0	9.19E-2	1.44E-3	9.77E+0	5.96E-2	6.50E-1	3.37E-3	-5.01E+0	5.48E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.68E+0	9.19E-2	1.44E-3	9.77E+0	5.96E-2	6.50E-1	3.37E-3	-5.01E+0	5.48E+0
PET	MJ	1.21E+1	9.32E-2	2.55E-2	1.22E+1	6.04E-2	6.92E-1	3.49E-3	-7.00E+0	5.96E+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	6.61E-3	9.80E-6	1.46E-6	6.62E-3	6.35E-6	6.34E-4	3.86E-6	-3.77E-3	3.49E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.03E-5	2.21E-7	2.73E-13	5.05E-5	1.43E-7	1.04E-6	3.92E-9	-4.85E-6	4.69E-5
NHWD	kg	4.60E-2	5.37E-3	1.05E-6	5.14E-2	3.48E-3	2.42E-2	1.39E-2	-1.79E-2	7.51E-2
RWD	kg	1.73E-5	5.89E-7	1.10E-13	1.79E-5	3.82E-7	2.40E-6	2.06E-8	-9.07E-6	1.16E-5
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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