Environmental Profile

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

Ecochain v3.5.80

Product:	3043634 - Angle ext. KANION PVC 70x90 BK
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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.89E-1	6.76E-3	1.45E-4	3.96E-1	3.64E-3	3.14E-1	1.16E-3	-1.92E-1	5.23E-1
GWP-f	kg CO2 eq	4.86E-1	6.76E-3	1.46E-4	4.93E-1	3.63E-3	1.84E-1	1.16E-3	-2.59E-1	4.23E-1
GWP-b	kg CO2 eq	-9.75E-2	4.10E-6	-1.54E-6	-9.75E-2	2.21E-6	1.30E-1	1.45E-6	6.72E-2	9.94E-2
GWP-luluc	kg CO2 eq	7.62E-4	2.39E-6	1.49E-7	7.65E-4	1.29E-6	4.79E-5	3.10E-8	-6.21E-4	1.93E-4
ODP	kg CFC11 eq	1.69E-7	1.56E-9	8.26E-12	1.71E-7	8.37E-10	1.37E-8	4.31E-11	-8.97E-8	9.56E-8
AP	mol H+ eq	2.35E-3	3.85E-5	1.47E-6	2.39E-3	2.07E-5	2.60E-4	1.05E-6	-1.06E-3	1.61E-3
EP-fw	kg P eq	2.21E-5	5.56E-8	8.24E-9	2.22E-5	2.99E-8	1.62E-6	1.39E-9	-1.26E-5	1.13E-5
EP-m	kg N eq	4.75E-4	1.38E-5	1.55E-7	4.88E-4	7.40E-6	6.98E-5	6.44E-7	-2.16E-4	3.51E-4
EP-T	mol N eq	5.00E-3	1.52E-4	1.85E-6	5.16E-3	8.16E-5	7.69E-4	4.18E-6	-2.40E-3	3.61E-3
POCP	kg NMVOC eq	1.66E-3	4.34E-5	6.28E-7	1.71E-3	2.33E-5	2.28E-4	1.44E-6	-7.67E-4	1.19E-3
ADP-mm	kg Sb eq	2.99E-4	1.75E-7	1.97E-8	2.99E-4	9.40E-8	1.00E-6	1.06E-9	-3.89E-6	2.96E-4
ADP-f	MJ	1.12E+1	1.04E-1	1.36E-3	1.13E+1	5.58E-2	6.56E-1	3.15E-3	-5.50E+0	6.53E+0
WDP	m3 depriv.	5.57E-1	3.18E-4	5.22E-5	5.57E-1	1.71E-4	2.35E-2	2.30E-5	-3.30E-1	2.51E-1
PM	disease inc.	2.17E-8	6.10E-10	9.08E-12	2.23E-8	3.28E-10	3.28E-9	2.17E-11	-1.24E-8	1.35E-8
IR	kBq U-235 eq	2.32E-2	4.53E-4	1.02E-6	2.37E-2	2.44E-4	2.38E-3	1.44E-5	-1.23E-2	1.41E-2
ETP-fw	CTUe	1.83E+1	8.42E-2	1.21E-2	1.84E+1	4.53E-2	4.60E+0	4.92E-2	-7.96E+0	1.51E+1
HTP-c	CTUh	4.66E-10	3.00E-12	6.17E-13	4.69E-10	1.61E-12	8.53E-11	8.88E-14	-1.62E-10	3.95E-10
HTP-nc	CTUh	1.16E-8	1.00E-10	1.57E-11	1.17E-8	5.40E-11	1.75E-9	9.47E-12	-3.48E-9	1.00E-8
SQP	Pt	1.26E+1	8.87E-2	2.24E-3	1.27E+1	4.77E-2	4.08E-1	8.05E-3	-1.97E+1	-6.55E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.12E+0	1.49E-3	2.40E-2	3.14E+0	8.00E-4	4.44E-2	1.16E-4	-3.43E+0	-2.48E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.12E+0	1.49E-3	2.40E-2	3.14E+0	8.00E-4	4.44E-2	1.16E-4	-3.43E+0	-2.48E-1
PENRE	MJ	1.20E+1	1.10E-1	1.44E-3	1.21E+1	5.92E-2	6.98E-1	3.34E-3	-5.93E+0	6.96E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.20E+1	1.10E-1	1.44E-3	1.21E+1	5.92E-2	6.98E-1	3.34E-3	-5.93E+0	6.96E+0
PET	MJ	1.51E+1	1.12E-1	2.55E-2	1.53E+1	6.00E-2	7.43E-1	3.46E-3	-9.36E+0	6.71E+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	7.76E-3	1.17E-5	1.46E-6	7.77E-3	6.31E-6	6.67E-4	3.84E-6	-5.10E-3	3.35E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.54E-5	2.65E-7	2.73E-13	4.57E-5	1.43E-7	1.16E-6	3.86E-9	-6.13E-6	4.08E-5
NHWD	kg	5.67E-2	6.43E-3	1.05E-6	6.31E-2	3.46E-3	2.79E-2	1.38E-2	-2.21E-2	8.62E-2
RWD	kg	2.17E-5	7.05E-7	1.10E-13	2.24E-5	3.79E-7	2.68E-6	2.04E-8	-1.15E-5	1.40E-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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