Environmental Profile

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

Ecochain v3.5.80

Product:	3021606 - KANION PVC Angle ext. 100x90 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	7.10E-1	1.35E-2	1.45E-4	7.23E-1	7.93E-3	6.72E-1	2.58E-3	-3.95E-1	1.01E+0
GWP-f	kg CO2 eq	9.68E-1	1.35E-2	1.46E-4	9.82E-1	7.92E-3	3.51E-1	2.58E-3	-5.16E-1	8.27E-1
GWP-b	kg CO2 eq	-2.60E-1	8.21E-6	-1.54E-6	-2.60E-1	4.81E-6	3.21E-1	3.20E-6	1.23E-1	1.83E-1
GWP-luluc	kg CO2 eq	1.50E-3	4.79E-6	1.49E-7	1.50E-3	2.80E-6	1.02E-4	6.84E-8	-1.21E-3	3.99E-4
ODP	kg CFC11 eq	3.64E-7	3.12E-9	8.26E-12	3.67E-7	1.83E-9	2.90E-8	9.48E-11	-1.90E-7	2.09E-7
AP	mol H+ eq	4.74E-3	7.70E-5	1.47E-6	4.82E-3	4.51E-5	5.42E-4	2.32E-6	-2.18E-3	3.22E-3
EP-fw	kg P eq	4.44E-5	1.11E-7	8.24E-9	4.45E-5	6.52E-8	3.45E-6	3.07E-9	-2.53E-5	2.27E-5
EP-m	kg N eq	9.45E-4	2.76E-5	1.55E-7	9.73E-4	1.61E-5	1.44E-4	1.48E-6	-4.43E-4	6.92E-4
EP-T	mol N eq	1.00E-2	3.04E-4	1.85E-6	1.03E-2	1.78E-4	1.58E-3	9.22E-6	-4.92E-3	7.16E-3
POCP	kg NMVOC eq	3.31E-3	8.68E-5	6.28E-7	3.40E-3	5.09E-5	4.70E-4	3.18E-6	-1.59E-3	2.33E-3
ADP-mm	kg Sb eq	6.53E-4	3.50E-7	1.97E-8	6.53E-4	2.05E-7	2.10E-6	2.33E-9	-8.55E-6	6.47E-4
ADP-f	MJ	2.24E+1	2.08E-1	1.36E-3	2.26E+1	1.22E-1	1.39E+0	6.93E-3	-1.12E+1	1.29E+1
WDP	m3 depriv.	1.15E+0	6.37E-4	5.22E-5	1.15E+0	3.73E-4	5.05E-2	5.07E-5	-6.79E-1	5.24E-1
PM	disease inc.	4.37E-8	1.22E-9	9.08E-12	4.50E-8	7.15E-10	6.81E-9	4.77E-11	-2.53E-8	2.72E-8
IR	kBq U-235 eq	4.87E-2	9.07E-4	1.02E-6	4.96E-2	5.31E-4	5.01E-3	3.18E-5	-2.53E-2	2.99E-2
ETP-fw	CTUe	3.59E+1	1.69E-1	1.21E-2	3.61E+1	9.87E-2	9.88E+0	1.06E-1	-1.55E+1	3.07E+1
HTP-c	CTUh	9.37E-10	6.00E-12	6.17E-13	9.43E-10	3.51E-12	1.74E-10	1.96E-13	-3.52E-10	7.69E-10
HTP-nc	CTUh	2.36E-8	2.01E-10	1.57E-11	2.38E-8	1.18E-10	3.68E-9	2.05E-11	-7.88E-9	1.98E-8
SQP	Pt	3.02E+1	1.78E-1	2.24E-3	3.04E+1	1.04E-1	8.58E-1	1.77E-2	-4.20E+1	-1.06E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.06E+0	2.98E-3	2.40E-2	7.08E+0	1.74E-3	9.47E-2	2.57E-4	-7.22E+0	-3.60E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.06E+0	2.98E-3	2.40E-2	7.08E+0	1.74E-3	9.47E-2	2.57E-4	-7.22E+0	-3.60E-2
PENRE	MJ	2.40E+1	2.20E-1	1.44E-3	2.42E+1	1.29E-1	1.48E+0	7.36E-3	-1.20E+1	1.38E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.40E+1	2.20E-1	1.44E-3	2.42E+1	1.29E-1	1.48E+0	7.36E-3	-1.20E+1	1.38E+1
PET	MJ	3.10E+1	2.23E-1	2.55E-2	3.13E+1	1.31E-1	1.57E+0	7.62E-3	-1.93E+1	1.37E+1
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	1.55E-2	2.35E-5	1.46E-6	1.55E-2	1.38E-5	1.44E-3	8.47E-6	-1.02E-2	6.84E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.77E-5	5.31E-7	2.73E-13	9.82E-5	3.11E-7	2.42E-6	8.49E-9	-1.22E-5	8.88E-5
NHWD	kg	1.14E-1	1.29E-2	1.05E-6	1.27E-1	7.54E-3	5.65E-2	3.04E-2	-4.73E-2	1.74E-1
RWD	kg	4.62E-5	1.41E-6	1.10E-13	4.76E-5	8.27E-7	5.60E-6	4.50E-8	-2.36E-5	3.04E-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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