Environmental Profile

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

Ecochain v3.5.80

Product:	3023997 - KANION PVC Angle ext. 70x90 BN
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	3.86E-1	6.63E-3	1.45E-4	3.93E-1	4.03E-3	3.07E-1	1.29E-3	-1.98E-1	5.07E-1
GWP-f	kg CO2 eq	4.82E-1	6.63E-3	1.46E-4	4.89E-1	4.03E-3	1.77E-1	1.29E-3	-2.64E-1	4.07E-1
GWP-b	kg CO2 eq	-9.70E-2	4.03E-6	-1.54E-6	-9.70E-2	2.45E-6	1.30E-1	1.61E-6	6.71E-2	9.98E-2
GWP-luluc	kg CO2 eq	7.49E-4	2.35E-6	1.49E-7	7.51E-4	1.43E-6	5.25E-5	3.47E-8	-6.32E-4	1.73E-4
ODP	kg CFC11 eq	1.83E-7	1.53E-9	8.26E-12	1.84E-7	9.28E-10	1.49E-8	4.78E-11	-9.71E-8	1.03E-7
AP	mol H+ eq	2.30E-3	3.78E-5	1.47E-6	2.34E-3	2.29E-5	2.78E-4	1.17E-6	-1.11E-3	1.53E-3
EP-fw	kg P eq	2.18E-5	5.45E-8	8.24E-9	2.19E-5	3.31E-8	1.77E-6	1.55E-9	-1.32E-5	1.05E-5
EP-m	kg N eq	4.60E-4	1.35E-5	1.55E-7	4.73E-4	8.21E-6	7.38E-5	7.12E-7	-2.24E-4	3.32E-4
EP-T	mol N eq	4.87E-3	1.49E-4	1.85E-6	5.02E-3	9.05E-5	8.13E-4	4.64E-6	-2.49E-3	3.45E-3
POCP	kg NMVOC eq	1.60E-3	4.26E-5	6.28E-7	1.65E-3	2.59E-5	2.42E-4	1.60E-6	-7.96E-4	1.12E-3
ADP-mm	kg Sb eq	1.08E-4	1.71E-7	1.97E-8	1.08E-4	1.04E-7	1.09E-6	1.18E-9	-4.23E-6	1.05E-4
ADP-f	MJ	1.12E+1	1.02E-1	1.36E-3	1.13E+1	6.18E-2	7.13E-1	3.49E-3	-5.71E+0	6.37E+0
WDP	m3 depriv.	5.90E-1	3.12E-4	5.22E-5	5.91E-1	1.90E-4	2.58E-2	2.65E-5	-3.54E-1	2.63E-1
PM	disease inc.	2.09E-8	5.98E-10	9.08E-12	2.15E-8	3.64E-10	3.52E-9	2.41E-11	-1.28E-8	1.26E-8
IR	kBq U-235 eq	2.28E-2	4.45E-4	1.02E-6	2.32E-2	2.70E-4	2.58E-3	1.60E-5	-1.30E-2	1.31E-2
ETP-fw	CTUe	1.68E+1	8.26E-2	1.21E-2	1.69E+1	5.02E-2	5.05E+0	5.42E-2	-8.17E+0	1.39E+1
HTP-c	CTUh	4.48E-10	2.94E-12	6.17E-13	4.51E-10	1.79E-12	9.04E-11	9.92E-14	-1.70E-10	3.74E-10
HTP-nc	CTUh	1.09E-8	9.85E-11	1.57E-11	1.10E-8	5.98E-11	1.89E-9	1.04E-11	-3.77E-9	9.23E-9
SQP	Pt	1.25E+1	8.70E-2	2.24E-3	1.26E+1	5.29E-2	4.42E-1	8.93E-3	-1.97E+1	-6.59E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.14E+0	1.46E-3	2.40E-2	3.17E+0	8.87E-4	4.85E-2	1.28E-4	-3.45E+0	-2.34E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.14E+0	1.46E-3	2.40E-2	3.17E+0	8.87E-4	4.85E-2	1.28E-4	-3.45E+0	-2.34E-1
PENRE	MJ	1.20E+1	1.08E-1	1.44E-3	1.21E+1	6.56E-2	7.58E-1	3.71E-3	-6.16E+0	6.80E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.20E+1	1.08E-1	1.44E-3	1.21E+1	6.56E-2	7.58E-1	3.71E-3	-6.16E+0	6.80E+0
PET	MJ	1.52E+1	1.09E-1	2.55E-2	1.53E+1	6.65E-2	8.07E-1	3.84E-3	-9.61E+0	6.56E+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	7.85E-3	1.15E-5	1.46E-6	7.87E-3	7.00E-6	7.26E-4	4.26E-6	-5.33E-3	3.27E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.16E-5	2.60E-7	2.73E-13	2.19E-5	1.58E-7	1.25E-6	4.29E-9	-6.25E-6	1.70E-5
NHWD	kg	5.77E-2	6.31E-3	1.05E-6	6.40E-2	3.83E-3	2.91E-2	1.53E-2	-2.33E-2	8.90E-2
RWD	kg	2.07E-5	6.92E-7	1.10E-13	2.14E-5	4.20E-7	2.88E-6	2.27E-8	-1.21E-5	1.27E-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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