Environmental Profile

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

Ecochain v3.5.80

Product:	3023994 - KANION PVC Angle ext. 130x90 Graphite
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	1.06E+0	1.52E-2	1.45E-4	1.08E+0	1.28E-2	7.89E-1	4.16E-3	-5.97E-1	1.29E+0
GWP-f	kg CO2 eq	1.32E+0	1.51E-2	1.46E-4	1.33E+0	1.28E-2	4.77E-1	4.16E-3	-6.97E-1	1.13E+0
GWP-b	kg CO2 eq	-2.56E-1	9.19E-6	-1.54E-6	-2.56E-1	7.76E-6	3.12E-1	5.15E-6	1.00E-1	1.56E-1
GWP-luluc	kg CO2 eq	1.71E-3	5.36E-6	1.49E-7	1.72E-3	4.53E-6	1.61E-4	1.11E-7	-1.21E-3	6.74E-4
ODP	kg CFC11 eq	5.56E-7	3.49E-9	8.26E-12	5.59E-7	2.95E-9	4.49E-8	1.53E-10	-2.91E-7	3.16E-7
AP	mol H+ eq	6.47E-3	8.62E-5	1.47E-6	6.56E-3	7.28E-5	8.00E-4	3.73E-6	-2.83E-3	4.60E-3
EP-fw	kg P eq	6.01E-5	1.25E-7	8.24E-9	6.02E-5	1.05E-7	5.39E-6	4.97E-9	-3.08E-5	3.49E-5
EP-m	kg N eq	1.21E-3	3.09E-5	1.55E-7	1.24E-3	2.61E-5	2.04E-4	2.35E-6	-5.48E-4	9.23E-4
EP-T	mol N eq	1.30E-2	3.40E-4	1.85E-6	1.33E-2	2.87E-4	2.25E-3	1.49E-5	-6.01E-3	9.87E-3
POCP	kg NMVOC eq	4.28E-3	9.72E-5	6.28E-7	4.37E-3	8.21E-5	6.70E-4	5.13E-6	-1.97E-3	3.16E-3
ADP-mm	kg Sb eq	1.00E-3	3.92E-7	1.97E-8	1.00E-3	3.31E-7	3.12E-6	3.77E-9	-1.27E-5	9.96E-4
ADP-f	MJ	3.07E+1	2.32E-1	1.36E-3	3.10E+1	1.96E-1	2.11E+0	1.12E-2	-1.58E+1	1.74E+1
WDP	m3 depriv.	1.76E+0	7.13E-4	5.22E-5	1.76E+0	6.02E-4	8.02E-2	8.45E-5	-9.47E-1	8.94E-1
PM	disease inc.	5.19E-8	1.37E-9	9.08E-12	5.33E-8	1.15E-9	9.96E-9	7.69E-11	-2.78E-8	3.67E-8
IR	kBq U-235 eq	6.65E-2	1.02E-3	1.02E-6	6.76E-2	8.58E-4	7.51E-3	5.12E-5	-3.38E-2	4.22E-2
ETP-fw	CTUe	4.25E+1	1.89E-1	1.21E-2	4.27E+1	1.59E-1	1.56E+1	1.71E-1	-1.65E+1	4.22E+1
HTP-c	CTUh	1.12E-9	6.72E-12	6.17E-13	1.13E-9	5.67E-12	2.56E-10	3.17E-13	-4.48E-10	9.42E-10
HTP-nc	CTUh	3.25E-8	2.25E-10	1.57E-11	3.27E-8	1.90E-10	5.65E-9	3.30E-11	-1.29E-8	2.57E-8
SQP	Pt	3.07E+1	1.99E-1	2.24E-3	3.09E+1	1.68E-1	1.30E+0	2.86E-2	-3.88E+1	-6.38E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.53E+0	3.33E-3	2.40E-2	8.56E+0	2.82E-3	1.48E-1	4.12E-4	-6.76E+0	1.95E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.53E+0	3.33E-3	2.40E-2	8.56E+0	2.82E-3	1.48E-1	4.12E-4	-6.76E+0	1.95E+0
PENRE	MJ	3.30E+1	2.47E-1	1.44E-3	3.32E+1	2.08E-1	2.24E+0	1.19E-2	-1.71E+1	1.86E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.30E+1	2.47E-1	1.44E-3	3.32E+1	2.08E-1	2.24E+0	1.19E-2	-1.71E+1	1.86E+1
PET	MJ	4.15E+1	2.50E-1	2.55E-2	4.18E+1	2.11E-1	2.39E+0	1.23E-2	-2.38E+1	2.06E+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	2.22E-2	2.63E-5	1.46E-6	2.23E-2	2.22E-5	2.25E-3	1.36E-5	-1.25E-2	1.21E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.47E-4	5.94E-7	2.73E-13	1.47E-4	5.02E-7	3.56E-6	1.37E-8	-1.50E-5	1.37E-4
NHWD	kg	1.44E-1	1.44E-2	1.05E-6	1.58E-1	1.22E-2	8.20E-2	4.90E-2	-6.07E-2	2.40E-1
RWD	kg	6.02E-5	1.58E-6	1.10E-13	6.18E-5	1.33E-6	8.21E-6	7.25E-8	-3.09E-5	4.05E-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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