Environmental Profile

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

Ecochain v3.5.80

Product:	3023990 - KANION PVC Angle ext. 100x135 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	1.46E+0	1.32E-2	3.22E-4	1.48E+0	6.90E-3	1.12E+0	2.27E-3	-3.91E-2	2.57E+0
GWP-f	kg CO2 eq	1.71E+0	1.32E-2	3.25E-4	1.72E+0	6.89E-3	4.53E-1	2.27E-3	-9.43E-1	1.24E+0
GWP-b	kg CO2 eq	-2.48E-1	8.01E-6	-3.43E-6	-2.48E-1	4.19E-6	6.65E-1	2.78E-6	9.10E-1	1.33E+0
GWP-luluc	kg CO2 eq	5.89E-3	4.67E-6	3.32E-7	5.90E-3	2.44E-6	1.10E-4	6.06E-8	-6.67E-3	-6.58E-4
ODP	kg CFC11 eq	4.13E-7	3.04E-9	1.84E-11	4.16E-7	1.59E-9	3.63E-8	8.27E-11	-2.29E-7	2.25E-7
AP	mol H+ eq	8.60E-3	7.52E-5	3.28E-6	8.68E-3	3.93E-5	8.68E-4	2.02E-6	-5.74E-3	3.85E-3
EP-fw	kg P eq	9.19E-5	1.09E-7	1.83E-8	9.20E-5	5.67E-8	3.84E-6	2.71E-9	-9.19E-5	4.05E-6
EP-m	kg N eq	2.29E-3	2.69E-5	3.45E-7	2.32E-3	1.41E-5	2.75E-4	1.29E-6	-1.28E-3	1.33E-3
EP-T	mol N eq	2.28E-2	2.96E-4	4.12E-6	2.31E-2	1.55E-4	3.00E-3	8.05E-6	-1.46E-2	1.16E-2
POCP	kg NMVOC eq	6.14E-3	8.47E-5	1.40E-6	6.23E-3	4.43E-5	8.97E-4	2.78E-6	-3.95E-3	3.22E-3
ADP-mm	kg Sb eq	6.13E-4	3.41E-7	4.38E-8	6.14E-4	1.78E-7	3.50E-6	2.05E-9	-1.29E-5	6.04E-4
ADP-f	MJ	3.30E+1	2.03E-1	3.02E-3	3.32E+1	1.06E-1	1.95E+0	6.05E-3	-1.80E+1	1.72E+1
WDP	m3 depriv.	1.34E+0	6.22E-4	1.16E-4	1.34E+0	3.25E-4	4.96E-2	4.77E-5	-1.75E+0	-3.52E-1
PM	disease inc.	1.03E-7	1.19E-9	2.02E-11	1.05E-7	6.22E-10	1.19E-8	4.17E-11	-9.85E-8	1.86E-8
IR	kBq U-235 eq	7.95E-2	8.85E-4	2.26E-6	8.04E-2	4.63E-4	7.63E-3	2.77E-5	-7.20E-2	1.65E-2
ETP-fw	CTUe	1.32E+2	1.64E-1	2.69E-2	1.33E+2	8.59E-2	9.95E+0	9.11E-2	-7.45E+1	6.82E+1
HTP-c	CTUh	1.27E-9	5.85E-12	1.37E-12	1.27E-9	3.06E-12	2.74E-10	1.73E-13	-7.88E-10	7.62E-10
HTP-nc	CTUh	3.24E-8	1.96E-10	3.48E-11	3.26E-8	1.02E-10	4.54E-9	1.77E-11	-2.26E-8	1.47E-8
SQP	Pt	6.18E+1	1.73E-1	4.98E-3	6.20E+1	9.05E-2	1.17E+0	1.55E-2	-1.83E+2	-1.20E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.18E+1	2.91E-3	5.35E-2	1.18E+1	1.52E-3	1.04E-1	2.22E-4	-3.28E+1	-2.08E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.18E+1	2.91E-3	5.35E-2	1.18E+1	1.52E-3	1.04E-1	2.22E-4	-3.28E+1	-2.08E+1
PENRE	MJ	3.54E+1	2.15E-1	3.21E-3	3.56E+1	1.12E-1	2.07E+0	6.42E-3	-1.93E+1	1.85E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.54E+1	2.15E-1	3.21E-3	3.56E+1	1.12E-1	2.07E+0	6.42E-3	-1.93E+1	1.85E+1
PET	MJ	4.72E+1	2.18E-1	5.67E-2	4.75E+1	1.14E-1	2.18E+0	6.65E-3	-5.21E+1	-2.33E+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	2.54E-2	2.29E-5	3.25E-6	2.54E-2	1.20E-5	1.55E-3	7.38E-6	-3.90E-2	-1.20E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.06E-4	5.18E-7	6.08E-13	1.07E-4	2.71E-7	4.13E-6	7.44E-9	-2.20E-5	8.90E-5
NHWD	kg	2.51E-1	1.26E-2	2.35E-6	2.64E-1	6.56E-3	8.46E-2	2.65E-2	-1.06E-1	2.75E-1
RWD	kg	7.82E-5	1.38E-6	2.44E-13	7.95E-5	7.20E-7	9.61E-6	3.93E-8	-6.83E-5	2.16E-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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