Environmental Profile

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

Ecochain v3.5.80

Product:	3024081 - KANION PVC Gutter Bracket 100 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	1.90E-1	2.87E-3	1.45E-4	1.93E-1	1.92E-3	1.29E-1	6.18E-4	-1.04E-1	2.21E-1
GWP-f	kg CO2 eq	2.22E-1	2.87E-3	1.46E-4	2.25E-1	1.92E-3	9.01E-2	6.18E-4	-1.17E-1	2.01E-1
GWP-b	kg CO2 eq	-3.23E-2	1.74E-6	-1.54E-6	-3.23E-2	1.16E-6	3.92E-2	7.64E-7	1.31E-2	2.00E-2
GWP-luluc	kg CO2 eq	2.57E-4	1.02E-6	1.49E-7	2.59E-4	6.79E-7	2.43E-5	1.67E-8	-1.64E-4	1.20E-4
ODP	kg CFC11 eq	8.48E-8	6.61E-10	8.26E-12	8.55E-8	4.42E-10	6.77E-9	2.27E-11	-4.51E-8	4.77E-8
AP	mol H+ eq	1.07E-3	1.63E-5	1.47E-6	1.08E-3	1.09E-5	1.23E-4	5.56E-7	-4.27E-4	7.91E-4
EP-fw	kg P eq	9.63E-6	2.36E-8	8.24E-9	9.66E-6	1.58E-8	8.16E-7	7.45E-10	-4.51E-6	5.99E-6
EP-m	kg N eq	1.98E-4	5.85E-6	1.55E-7	2.04E-4	3.91E-6	3.18E-5	3.38E-7	-8.29E-5	1.57E-4
EP-T	mol N eq	2.12E-3	6.45E-5	1.85E-6	2.18E-3	4.31E-5	3.50E-4	2.21E-6	-9.07E-4	1.67E-3
POCP	kg NMVOC eq	7.33E-4	1.84E-5	6.28E-7	7.52E-4	1.23E-5	1.04E-4	7.63E-7	-3.03E-4	5.66E-4
ADP-mm	kg Sb eq	1.49E-4	7.42E-8	1.97E-8	1.49E-4	4.96E-8	4.73E-7	5.64E-10	-1.86E-6	1.48E-4
ADP-f	MJ	5.33E+0	4.40E-2	1.36E-3	5.38E+0	2.94E-2	3.20E-1	1.66E-3	-2.58E+0	3.15E+0
WDP	m3 depriv.	2.77E-1	1.35E-4	5.22E-5	2.77E-1	9.03E-5	1.21E-2	1.32E-5	-1.41E-1	1.48E-1
PM	disease inc.	8.89E-9	2.59E-10	9.08E-12	9.16E-9	1.73E-10	1.53E-9	1.15E-11	-3.99E-9	6.88E-9
IR	kBq U-235 eq	1.09E-2	1.93E-4	1.02E-6	1.11E-2	1.29E-4	1.14E-3	7.61E-6	-4.97E-3	7.36E-3
ETP-fw	CTUe	6.43E+0	3.58E-2	1.21E-2	6.48E+0	2.39E-2	2.35E+0	2.56E-2	-2.37E+0	6.50E+0
HTP-c	CTUh	1.89E-10	1.27E-12	6.17E-13	1.91E-10	8.51E-13	4.14E-11	4.77E-14	-6.50E-11	1.68E-10
HTP-nc	CTUh	5.15E-9	4.26E-11	1.57E-11	5.21E-9	2.85E-11	8.71E-10	4.94E-12	-1.64E-9	4.47E-9
SQP	Pt	4.06E+0	3.77E-2	2.24E-3	4.10E+0	2.52E-2	1.99E-1	4.25E-3	-5.01E+0	-6.81E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.09E+0	6.32E-4	2.40E-2	1.12E+0	4.22E-4	2.24E-2	6.08E-5	-8.81E-1	2.58E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.09E+0	6.32E-4	2.40E-2	1.12E+0	4.22E-4	2.24E-2	6.08E-5	-8.81E-1	2.58E-1
PENRE	MJ	5.72E+0	4.68E-2	1.44E-3	5.77E+0	3.13E-2	3.41E-1	1.77E-3	-2.79E+0	3.35E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.72E+0	4.68E-2	1.44E-3	5.77E+0	3.13E-2	3.41E-1	1.77E-3	-2.79E+0	3.35E+0
PET	MJ	6.81E+0	4.74E-2	2.55E-2	6.88E+0	3.17E-2	3.63E-1	1.83E-3	-3.67E+0	3.61E+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	3.63E-3	4.98E-6	1.46E-6	3.64E-3	3.33E-6	3.38E-4	2.03E-6	-1.82E-3	2.16E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.21E-5	1.13E-7	2.73E-13	2.22E-5	7.53E-8	5.43E-7	2.05E-9	-2.59E-6	2.03E-5
NHWD	kg	2.31E-2	2.73E-3	1.05E-6	2.58E-2	1.82E-3	1.34E-2	7.29E-3	-8.96E-3	3.93E-2
RWD	kg	1.01E-5	3.00E-7	1.10E-13	1.04E-5	2.00E-7	1.25E-6	1.08E-8	-4.57E-6	7.31E-6
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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