Environmental Profile

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

Ecochain v3.5.80

Product:	3021567 - KANION PVC Gutter Bracket 130 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	3.02E-1	4.26E-3	1.45E-4	3.07E-1	3.34E-3	1.66E-1	1.08E-3	-1.64E-1	3.14E-1
GWP-f	kg CO2 eq	3.33E-1	4.26E-3	1.46E-4	3.37E-1	3.34E-3	1.28E-1	1.08E-3	-1.74E-1	2.95E-1
GWP-b	kg CO2 eq	-3.11E-2	2.59E-6	-1.54E-6	-3.11E-2	2.03E-6	3.84E-2	1.33E-6	1.08E-2	1.82E-2
GWP-luluc	kg CO2 eq	3.46E-4	1.51E-6	1.49E-7	3.48E-4	1.18E-6	4.18E-5	2.90E-8	-1.91E-4	2.00E-4
ODP	kg CFC11 eq	1.44E-7	9.81E-10	8.26E-12	1.45E-7	7.69E-10	1.15E-8	3.96E-11	-7.54E-8	8.24E-8
AP	mol H+ eq	1.61E-3	2.43E-5	1.47E-6	1.64E-3	1.90E-5	2.02E-4	9.68E-7	-6.44E-4	1.21E-3
EP-fw	kg P eq	1.47E-5	3.50E-8	8.24E-9	1.48E-5	2.75E-8	1.40E-6	1.29E-9	-6.56E-6	9.65E-6
EP-m	kg N eq	2.88E-4	8.68E-6	1.55E-7	2.97E-4	6.81E-6	5.06E-5	5.89E-7	-1.20E-4	2.35E-4
EP-T	mol N eq	3.10E-3	9.56E-5	1.85E-6	3.20E-3	7.50E-5	5.58E-4	3.85E-6	-1.30E-3	2.54E-3
POCP	kg NMVOC eq	1.06E-3	2.73E-5	6.28E-7	1.09E-3	2.14E-5	1.66E-4	1.33E-6	-4.39E-4	8.36E-4
ADP-mm	kg Sb eq	2.96E-4	1.10E-7	1.97E-8	2.97E-4	8.64E-8	7.85E-7	9.80E-10	-3.09E-6	2.94E-4
ADP-f	MJ	8.08E+0	6.54E-2	1.36E-3	8.15E+0	5.13E-2	5.38E-1	2.90E-3	-4.01E+0	4.73E+0
WDP	m3 depriv.	4.55E-1	2.01E-4	5.22E-5	4.55E-1	1.57E-4	2.09E-2	2.27E-5	-2.26E-1	2.50E-1
PM	disease inc.	1.23E-8	3.84E-10	9.08E-12	1.27E-8	3.01E-10	2.50E-9	2.00E-11	-5.23E-9	1.03E-8
IR	kBq U-235 eq	1.72E-2	2.86E-4	1.02E-6	1.75E-2	2.24E-4	1.90E-3	1.32E-5	-7.70E-3	1.19E-2
ETP-fw	CTUe	9.40E+0	5.31E-2	1.21E-2	9.47E+0	4.16E-2	4.06E+0	4.47E-2	-3.05E+0	1.06E+1
HTP-c	CTUh	2.81E-10	1.89E-12	6.17E-13	2.83E-10	1.48E-12	6.62E-11	8.27E-14	-9.59E-11	2.55E-10
HTP-nc	CTUh	8.39E-9	6.33E-11	1.57E-11	8.47E-9	4.96E-11	1.46E-9	8.62E-12	-2.87E-9	7.11E-9
SQP	Pt	4.40E+0	5.59E-2	2.24E-3	4.45E+0	4.39E-2	3.32E-1	7.40E-3	-4.84E+0	-8.20E-4
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.62E+0	9.38E-4	2.40E-2	1.65E+0	7.35E-4	3.84E-2	1.06E-4	-8.86E-1	7.99E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.62E+0	9.38E-4	2.40E-2	1.65E+0	7.35E-4	3.84E-2	1.06E-4	-8.86E-1	7.99E-1
PENRE	MJ	8.67E+0	6.94E-2	1.44E-3	8.74E+0	5.44E-2	5.72E-1	3.07E-3	-4.33E+0	5.04E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.67E+0	6.94E-2	1.44E-3	8.74E+0	5.44E-2	5.72E-1	3.07E-3	-4.33E+0	5.04E+0
PET	MJ	1.03E+1	7.03E-2	2.55E-2	1.04E+1	5.52E-2	6.11E-1	3.18E-3	-5.21E+0	5.84E+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	5.60E-3	7.40E-6	1.46E-6	5.61E-3	5.80E-6	5.77E-4	3.53E-6	-2.66E-3	3.54E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.25E-5	1.67E-7	2.73E-13	4.26E-5	1.31E-7	8.92E-7	3.56E-9	-3.67E-6	4.00E-5
NHWD	kg	3.30E-2	4.05E-3	1.05E-6	3.71E-2	3.18E-3	2.12E-2	1.27E-2	-1.34E-2	6.07E-2
RWD	kg	1.58E-5	4.45E-7	1.10E-13	1.63E-5	3.49E-7	2.06E-6	1.88E-8	-6.95E-6	1.17E-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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