Environmental Profile

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

Ecochain v3.5.80

Product:	3021568 - KANION PVC Gutter Bracket 130 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	2.55E-1	4.07E-3	1.45E-4	2.59E-1	3.16E-3	1.43E-1	1.02E-3	-1.45E-1	2.62E-1
GWP-f	kg CO2 eq	2.86E-1	4.06E-3	1.46E-4	2.90E-1	3.15E-3	1.05E-1	1.02E-3	-1.56E-1	2.43E-1
GWP-b	kg CO2 eq	-3.10E-2	2.47E-6	-1.54E-6	-3.10E-2	1.92E-6	3.84E-2	1.26E-6	1.09E-2	1.83E-2
GWP-luluc	kg CO2 eq	2.96E-4	1.44E-6	1.49E-7	2.98E-4	1.12E-6	3.93E-5	2.75E-8	-1.86E-4	1.52E-4
ODP	kg CFC11 eq	1.34E-7	9.36E-10	8.26E-12	1.35E-7	7.27E-10	1.08E-8	3.74E-11	-7.03E-8	7.63E-8
AP	mol H+ eq	1.35E-3	2.31E-5	1.47E-6	1.38E-3	1.80E-5	1.88E-4	9.16E-7	-6.05E-4	9.79E-4
EP-fw	kg P eq	1.25E-5	3.34E-8	8.24E-9	1.25E-5	2.60E-8	1.31E-6	1.23E-9	-6.25E-6	7.63E-6
EP-m	kg N eq	2.38E-4	8.28E-6	1.55E-7	2.47E-4	6.43E-6	4.68E-5	5.56E-7	-1.12E-4	1.89E-4
EP-T	mol N eq	2.59E-3	9.13E-5	1.85E-6	2.68E-3	7.09E-5	5.16E-4	3.64E-6	-1.21E-3	2.06E-3
POCP	kg NMVOC eq	8.72E-4	2.61E-5	6.28E-7	8.98E-4	2.03E-5	1.54E-4	1.26E-6	-4.09E-4	6.65E-4
ADP-mm	kg Sb eq	8.05E-5	1.05E-7	1.97E-8	8.06E-5	8.16E-8	7.37E-7	9.28E-10	-2.92E-6	7.85E-5
ADP-f	MJ	6.99E+0	6.24E-2	1.36E-3	7.05E+0	4.84E-2	5.05E-1	2.74E-3	-3.63E+0	3.97E+0
WDP	m3 depriv.	4.16E-1	1.91E-4	5.22E-5	4.16E-1	1.49E-4	1.96E-2	2.20E-5	-2.14E-1	2.22E-1
PM	disease inc.	1.02E-8	3.67E-10	9.08E-12	1.05E-8	2.85E-10	2.34E-9	1.89E-11	-5.00E-9	8.19E-9
IR	kBq U-235 eq	1.43E-2	2.73E-4	1.02E-6	1.46E-2	2.12E-4	1.79E-3	1.25E-5	-7.26E-3	9.36E-3
ETP-fw	CTUe	7.00E+0	5.06E-2	1.21E-2	7.07E+0	3.93E-2	3.82E+0	4.20E-2	-2.93E+0	8.04E+0
HTP-c	CTUh	2.28E-10	1.80E-12	6.17E-13	2.31E-10	1.40E-12	6.08E-11	7.86E-14	-9.09E-11	2.02E-10
HTP-nc	CTUh	6.66E-9	6.04E-11	1.57E-11	6.73E-9	4.69E-11	1.36E-9	8.11E-12	-2.72E-9	5.43E-9
SQP	Pt	4.21E+0	5.34E-2	2.24E-3	4.26E+0	4.14E-2	3.11E-1	7.00E-3	-4.81E+0	-1.90E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.58E+0	8.95E-4	2.40E-2	1.61E+0	6.95E-4	3.60E-2	1.00E-4	-8.77E-1	7.68E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.58E+0	8.95E-4	2.40E-2	1.61E+0	6.95E-4	3.60E-2	1.00E-4	-8.77E-1	7.68E-1
PENRE	MJ	7.49E+0	6.62E-2	1.44E-3	7.56E+0	5.14E-2	5.37E-1	2.91E-3	-3.91E+0	4.24E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.49E+0	6.62E-2	1.44E-3	7.56E+0	5.14E-2	5.37E-1	2.91E-3	-3.91E+0	4.24E+0
PET	MJ	9.08E+0	6.71E-2	2.55E-2	9.17E+0	5.21E-2	5.73E-1	3.01E-3	-4.79E+0	5.01E+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	4.89E-3	7.06E-6	1.46E-6	4.90E-3	5.48E-6	5.40E-4	3.34E-6	-2.53E-3	2.92E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.47E-5	1.60E-7	2.73E-13	1.49E-5	1.24E-7	8.34E-7	3.37E-9	-3.30E-6	1.25E-5
NHWD	kg	2.97E-2	3.87E-3	1.05E-6	3.35E-2	3.00E-3	1.92E-2	1.20E-2	-1.27E-2	5.50E-2
RWD	kg	1.28E-5	4.24E-7	1.10E-13	1.32E-5	3.29E-7	1.93E-6	1.78E-8	-6.55E-6	8.93E-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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