Environmental Profile

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

Ecochain v3.5.80

Product:	3024083 - KANION PVC Gutter Bracket 130 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	2.85E-1	3.84E-3	1.45E-4	2.89E-1	3.39E-3	1.50E-1	1.10E-3	-1.54E-1	2.89E-1
GWP-f	kg CO2 eq	3.15E-1	3.83E-3	1.46E-4	3.19E-1	3.39E-3	1.11E-1	1.10E-3	-1.65E-1	2.70E-1
GWP-b	kg CO2 eq	-3.05E-2	2.33E-6	-1.54E-6	-3.05E-2	2.06E-6	3.84E-2	1.35E-6	1.08E-2	1.87E-2
GWP-luluc	kg CO2 eq	3.38E-4	1.36E-6	1.49E-7	3.39E-4	1.20E-6	4.21E-5	2.96E-8	-1.92E-4	1.90E-4
ODP	kg CFC11 eq	1.42E-7	8.84E-10	8.26E-12	1.43E-7	7.82E-10	1.16E-8	4.02E-11	-7.53E-8	8.02E-8
AP	mol H+ eq	1.55E-3	2.18E-5	1.47E-6	1.57E-3	1.93E-5	2.01E-4	9.85E-7	-6.43E-4	1.15E-3
EP-fw	kg P eq	1.44E-5	3.16E-8	8.24E-9	1.44E-5	2.79E-8	1.41E-6	1.32E-9	-6.62E-6	9.25E-6
EP-m	kg N eq	2.75E-4	7.82E-6	1.55E-7	2.83E-4	6.91E-6	5.00E-5	5.97E-7	-1.18E-4	2.22E-4
EP-T	mol N eq	2.98E-3	8.61E-5	1.85E-6	3.07E-3	7.62E-5	5.51E-4	3.91E-6	-1.28E-3	2.42E-3
POCP	kg NMVOC eq	9.83E-4	2.46E-5	6.28E-7	1.01E-3	2.18E-5	1.65E-4	1.35E-6	-4.33E-4	7.64E-4
ADP-mm	kg Sb eq	2.97E-4	9.92E-8	1.97E-8	2.97E-4	8.77E-8	7.90E-7	9.99E-10	-3.13E-6	2.95E-4
ADP-f	MJ	7.40E+0	5.89E-2	1.36E-3	7.46E+0	5.21E-2	5.41E-1	2.95E-3	-3.86E+0	4.20E+0
WDP	m3 depriv.	4.48E-1	1.81E-4	5.22E-5	4.49E-1	1.60E-4	2.10E-2	2.39E-5	-2.28E-1	2.42E-1
PM	disease inc.	1.13E-8	3.46E-10	9.08E-12	1.16E-8	3.06E-10	2.50E-9	2.03E-11	-5.24E-9	9.20E-9
IR	kBq U-235 eq	1.60E-2	2.57E-4	1.02E-6	1.62E-2	2.28E-4	1.91E-3	1.35E-5	-7.73E-3	1.07E-2
ETP-fw	CTUe	9.27E+0	4.78E-2	1.21E-2	9.33E+0	4.23E-2	4.09E+0	4.51E-2	-3.07E+0	1.04E+1
HTP-c	CTUh	2.82E-10	1.70E-12	6.17E-13	2.84E-10	1.50E-12	6.52E-11	8.46E-14	-9.62E-11	2.55E-10
HTP-nc	CTUh	8.41E-9	5.70E-11	1.57E-11	8.48E-9	5.04E-11	1.46E-9	8.71E-12	-2.90E-9	7.10E-9
SQP	Pt	4.32E+0	5.04E-2	2.24E-3	4.37E+0	4.45E-2	3.34E-1	7.52E-3	-4.84E+0	-7.91E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.62E+0	8.44E-4	2.40E-2	1.64E+0	7.47E-4	3.87E-2	1.07E-4	-8.87E-1	7.94E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.62E+0	8.44E-4	2.40E-2	1.64E+0	7.47E-4	3.87E-2	1.07E-4	-8.87E-1	7.94E-1
PENRE	MJ	7.94E+0	6.25E-2	1.44E-3	8.00E+0	5.53E-2	5.76E-1	3.13E-3	-4.16E+0	4.48E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.94E+0	6.25E-2	1.44E-3	8.00E+0	5.53E-2	5.76E-1	3.13E-3	-4.16E+0	4.48E+0
PET	MJ	9.56E+0	6.33E-2	2.55E-2	9.65E+0	5.60E-2	6.14E-1	3.23E-3	-5.05E+0	5.27E+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	5.43E-3	6.66E-6	1.46E-6	5.44E-3	5.89E-6	5.79E-4	3.59E-6	-2.68E-3	3.35E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.25E-5	1.51E-7	2.73E-13	4.27E-5	1.33E-7	8.93E-7	3.63E-9	-3.49E-6	4.02E-5
NHWD	kg	3.28E-2	3.65E-3	1.05E-6	3.64E-2	3.23E-3	2.05E-2	1.29E-2	-1.35E-2	5.96E-2
RWD	kg	1.41E-5	4.00E-7	1.10E-13	1.45E-5	3.54E-7	2.06E-6	1.91E-8	-6.95E-6	9.94E-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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