Environmental Profile

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

Ecochain v3.5.80

Product:	3021687 - KANION PVC Rainwater Adaptor 90/110 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	3.56E-1	6.15E-3	1.45E-4	3.62E-1	3.66E-3	2.39E-1	1.18E-3	-1.87E-1	4.19E-1
GWP-f	kg CO2 eq	4.19E-1	6.15E-3	1.46E-4	4.25E-1	3.65E-3	1.58E-1	1.18E-3	-2.20E-1	3.68E-1
GWP-b	kg CO2 eq	-6.39E-2	3.73E-6	-1.54E-6	-6.39E-2	2.22E-6	8.17E-2	1.46E-6	3.36E-2	5.13E-2
GWP-luluc	kg CO2 eq	5.40E-4	2.18E-6	1.49E-7	5.42E-4	1.29E-6	4.66E-5	3.17E-8	-3.73E-4	2.17E-4
ODP	kg CFC11 eq	1.63E-7	1.42E-9	8.26E-12	1.64E-7	8.42E-10	1.30E-8	4.34E-11	-8.56E-8	9.24E-8
AP	mol H+ eq	2.03E-3	3.50E-5	1.47E-6	2.07E-3	2.08E-5	2.37E-4	1.06E-6	-8.56E-4	1.47E-3
EP-fw	kg P eq	1.89E-5	5.06E-8	8.24E-9	1.89E-5	3.01E-8	1.57E-6	1.42E-9	-9.40E-6	1.11E-5
EP-m	kg N eq	3.86E-4	1.25E-5	1.55E-7	3.99E-4	7.45E-6	6.14E-5	6.45E-7	-1.67E-4	3.02E-4
EP-T	mol N eq	4.13E-3	1.38E-4	1.85E-6	4.27E-3	8.21E-5	6.77E-4	4.22E-6	-1.83E-3	3.20E-3
POCP	kg NMVOC eq	1.39E-3	3.95E-5	6.28E-7	1.43E-3	2.35E-5	2.01E-4	1.45E-6	-6.08E-4	1.05E-3
ADP-mm	kg Sb eq	3.46E-4	1.59E-7	1.97E-8	3.46E-4	9.46E-8	9.21E-7	1.07E-9	-3.60E-6	3.44E-4
ADP-f	MJ	9.84E+0	9.44E-2	1.36E-3	9.93E+0	5.61E-2	6.18E-1	3.17E-3	-4.85E+0	5.76E+0
WDP	m3 depriv.	5.22E-1	2.90E-4	5.22E-5	5.23E-1	1.72E-4	2.31E-2	2.49E-5	-2.81E-1	2.65E-1
PM	disease inc.	1.72E-8	5.55E-10	9.08E-12	1.78E-8	3.30E-10	2.97E-9	2.18E-11	-8.54E-9	1.26E-8
IR	kBq U-235 eq	2.08E-2	4.12E-4	1.02E-6	2.12E-2	2.45E-4	2.21E-3	1.45E-5	-9.95E-3	1.37E-2
ETP-fw	CTUe	1.39E+1	7.66E-2	1.21E-2	1.40E+1	4.56E-2	4.50E+0	4.89E-2	-5.23E+0	1.34E+1
HTP-c	CTUh	4.12E-10	2.73E-12	6.17E-13	4.16E-10	1.62E-12	7.81E-11	9.06E-14	-1.30E-10	3.66E-10
HTP-nc	CTUh	1.08E-8	9.13E-11	1.57E-11	1.09E-8	5.43E-11	1.66E-9	9.43E-12	-2.98E-9	9.62E-9
SQP	Pt	8.33E+0	8.07E-2	2.24E-3	8.42E+0	4.80E-2	3.84E-1	8.10E-3	-1.13E+1	-2.45E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.42E+0	1.35E-3	2.40E-2	2.45E+0	8.05E-4	4.30E-2	1.16E-4	-1.99E+0	5.03E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.42E+0	1.35E-3	2.40E-2	2.45E+0	8.05E-4	4.30E-2	1.16E-4	-1.99E+0	5.03E-1
PENRE	MJ	1.06E+1	1.00E-1	1.44E-3	1.07E+1	5.96E-2	6.57E-1	3.37E-3	-5.24E+0	6.14E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.06E+1	1.00E-1	1.44E-3	1.07E+1	5.96E-2	6.57E-1	3.37E-3	-5.24E+0	6.14E+0
PET	MJ	1.30E+1	1.02E-1	2.55E-2	1.31E+1	6.04E-2	7.00E-1	3.48E-3	-7.23E+0	6.64E+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	6.85E-3	1.07E-5	1.46E-6	6.86E-3	6.35E-6	6.45E-4	3.87E-6	-3.79E-3	3.73E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.04E-5	2.41E-7	2.73E-13	5.06E-5	1.43E-7	1.05E-6	3.90E-9	-5.08E-6	4.67E-5
NHWD	kg	4.65E-2	5.85E-3	1.05E-6	5.23E-2	3.48E-3	2.52E-2	1.39E-2	-1.80E-2	7.69E-2
RWD	kg	1.93E-5	6.42E-7	1.10E-13	1.99E-5	3.82E-7	2.43E-6	2.06E-8	-9.16E-6	1.36E-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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