Environmental Profile

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

Ecochain v3.5.80

Product:	3024017 - KANION PVC Branch 110/110x67 Graph.S/S/S
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	9.55E-1	2.21E-2	1.45E-4	9.78E-1	1.15E-2	1.12E+0	3.70E-3	-5.49E-1	1.56E+0
GWP-f	kg CO2 eq	1.47E+0	2.21E-2	1.46E-4	1.50E+0	1.15E-2	4.78E-1	3.70E-3	-7.93E-1	1.20E+0
GWP-b	kg CO2 eq	-5.21E-1	1.34E-5	-1.54E-6	-5.21E-1	6.98E-6	6.42E-1	4.59E-6	2.47E-1	3.68E-1
GWP-luluc	kg CO2 eq	2.63E-3	7.83E-6	1.49E-7	2.64E-3	4.07E-6	1.51E-4	9.94E-8	-2.30E-3	4.93E-4
ODP	kg CFC11 eq	5.28E-7	5.10E-9	8.26E-12	5.33E-7	2.65E-9	4.33E-8	1.36E-10	-2.83E-7	2.96E-7
AP	mol H+ eq	7.31E-3	1.26E-4	1.47E-6	7.44E-3	6.55E-5	8.25E-4	3.33E-6	-3.63E-3	4.70E-3
EP-fw	kg P eq	6.98E-5	1.82E-7	8.24E-9	7.00E-5	9.46E-8	5.11E-6	4.45E-9	-4.38E-5	3.14E-5
EP-m	kg N eq	1.52E-3	4.51E-5	1.55E-7	1.56E-3	2.34E-5	2.22E-4	2.03E-6	-7.52E-4	1.06E-3
EP-T	mol N eq	1.60E-2	4.97E-4	1.85E-6	1.65E-2	2.58E-4	2.45E-3	1.33E-5	-8.43E-3	1.08E-2
POCP	kg NMVOC eq	5.11E-3	1.42E-4	6.28E-7	5.25E-3	7.38E-5	7.28E-4	4.57E-6	-2.68E-3	3.38E-3
ADP-mm	kg Sb eq	9.49E-4	5.73E-7	1.97E-8	9.50E-4	2.97E-7	3.23E-6	3.37E-9	-1.30E-5	9.40E-4
ADP-f	MJ	3.24E+1	3.40E-1	1.36E-3	3.27E+1	1.77E-1	2.10E+0	9.98E-3	-1.70E+1	1.80E+1
WDP	m3 depriv.	1.69E+0	1.04E-3	5.22E-5	1.70E+0	5.42E-4	7.38E-2	7.71E-5	-1.10E+0	6.74E-1
PM	disease inc.	6.95E-8	2.00E-9	9.08E-12	7.16E-8	1.04E-9	1.05E-8	6.87E-11	-4.60E-8	3.71E-8
IR	kBq U-235 eq	7.05E-2	1.48E-3	1.02E-6	7.20E-2	7.72E-4	7.64E-3	4.56E-5	-4.19E-2	3.86E-2
ETP-fw	CTUe	6.14E+1	2.76E-1	1.21E-2	6.17E+1	1.43E-1	1.45E+1	1.54E-1	-2.84E+1	4.80E+1
HTP-c	CTUh	1.55E-9	9.82E-12	6.17E-13	1.56E-9	5.10E-12	2.66E-10	2.84E-13	-6.04E-10	1.23E-9
HTP-nc	CTUh	3.69E-8	3.29E-10	1.57E-11	3.72E-8	1.71E-10	5.47E-9	2.97E-11	-1.25E-8	3.04E-8
SQP	Pt	5.87E+1	2.91E-1	2.24E-3	5.90E+1	1.51E-1	1.30E+0	2.55E-2	-8.35E+1	-2.30E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.27E+1	4.87E-3	2.40E-2	1.28E+1	2.53E-3	1.40E-1	3.66E-4	-1.42E+1	-1.34E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.27E+1	4.87E-3	2.40E-2	1.28E+1	2.53E-3	1.40E-1	3.66E-4	-1.42E+1	-1.34E+0
PENRE	MJ	3.47E+1	3.61E-1	1.44E-3	3.51E+1	1.87E-1	2.23E+0	1.06E-2	-1.82E+1	1.93E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.47E+1	3.61E-1	1.44E-3	3.51E+1	1.87E-1	2.23E+0	1.06E-2	-1.82E+1	1.93E+1
PET	MJ	4.75E+1	3.66E-1	2.55E-2	4.78E+1	1.90E-1	2.37E+0	1.10E-2	-3.25E+1	1.79E+1
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	2.34E-2	3.84E-5	1.46E-6	2.35E-2	2.00E-5	2.09E-3	1.22E-5	-1.75E-2	8.06E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.45E-4	8.69E-7	2.73E-13	1.46E-4	4.51E-7	3.72E-6	1.23E-8	-1.95E-5	1.31E-4
NHWD	kg	1.88E-1	2.11E-2	1.05E-6	2.09E-1	1.09E-2	8.47E-2	4.37E-2	-8.04E-2	2.68E-1
RWD	kg	6.48E-5	2.31E-6	1.10E-13	6.72E-5	1.20E-6	8.64E-6	6.47E-8	-3.94E-5	3.77E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777