Environmental Profile

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

Ecochain v3.5.80

Product:	3084328 - KANION PVC Stopend ext. 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	6.54E+0	3.59E-3	1.45E-4	6.54E+0	8.37E-2	2.42E+0	2.60E-2	-3.59E+0	5.47E+0
GWP-f	kg CO2 eq	6.53E+0	3.59E-3	1.46E-4	6.54E+0	8.36E-2	2.33E+0	2.60E-2	-3.60E+0	5.38E+0
GWP-b	kg CO2 eq	-6.21E-4	2.18E-6	-1.54E-6	-6.20E-4	5.08E-5	7.93E-2	3.38E-5	9.19E-3	8.80E-2
GWP-luluc	kg CO2 eq	5.18E-3	1.27E-6	1.49E-7	5.18E-3	2.96E-5	1.08E-3	6.59E-7	-2.58E-3	3.70E-3
ODP	kg CFC11 eq	3.73E-6	8.28E-10	8.26E-12	3.73E-6	1.93E-8	3.00E-7	9.88E-10	-1.80E-6	2.24E-6
AP	mol H+ eq	2.87E-2	2.05E-5	1.47E-6	2.87E-2	4.76E-4	4.94E-3	2.39E-5	-1.38E-2	2.04E-2
EP-fw	kg P eq	2.85E-4	2.96E-8	8.24E-9	2.85E-4	6.88E-7	3.61E-5	3.03E-8	-1.35E-4	1.86E-4
EP-m	kg N eq	4.87E-3	7.32E-6	1.55E-7	4.87E-3	1.70E-4	1.18E-3	1.52E-5	-2.39E-3	3.85E-3
EP-T	mol N eq	5.16E-2	8.07E-5	1.85E-6	5.17E-2	1.88E-3	1.31E-2	9.56E-5	-2.55E-2	4.12E-2
POCP	kg NMVOC eq	1.79E-2	2.31E-5	6.28E-7	1.80E-2	5.37E-4	3.90E-3	3.28E-5	-8.83E-3	1.36E-2
ADP-mm	kg Sb eq	2.06E-4	9.29E-8	1.97E-8	2.07E-4	2.16E-6	1.95E-5	2.36E-8	-7.35E-5	1.55E-4
ADP-f	MJ	1.67E+2	5.51E-2	1.36E-3	1.67E+2	1.28E+0	1.34E+1	7.20E-2	-8.73E+1	9.43E+1
WDP	m3 depriv.	1.10E+1	1.69E-4	5.22E-5	1.10E+1	3.94E-3	5.47E-1	3.36E-4	-5.21E+0	6.33E+0
PM	disease inc.	1.89E-7	3.24E-10	9.08E-12	1.89E-7	7.55E-9	6.02E-8	4.96E-10	-9.01E-8	1.67E-7
IR	kBq U-235 eq	3.56E-1	2.41E-4	1.02E-6	3.56E-1	5.61E-3	4.74E-2	3.33E-4	-1.69E-1	2.40E-1
ETP-fw	CTUe	1.11E+2	4.48E-2	1.21E-2	1.11E+2	1.04E+0	1.08E+2	1.20E+0	-5.25E+1	1.69E+2
HTP-c	CTUh	4.12E-9	1.59E-12	6.17E-13	4.12E-9	3.71E-11	1.39E-9	1.90E-12	-1.93E-9	3.62E-9
HTP-nc	CTUh	1.41E-7	5.34E-11	1.57E-11	1.41E-7	1.24E-9	3.65E-8	2.29E-10	-6.58E-8	1.14E-7
SQP	Pt	2.64E+1	4.72E-2	2.24E-3	2.65E+1	1.10E+0	8.10E+0	1.85E-1	-2.00E+1	1.59E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.52E+0	7.91E-4	2.40E-2	9.54E+0	1.84E-2	9.89E-1	2.76E-3	-5.55E+0	5.00E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.52E+0	7.91E-4	2.40E-2	9.54E+0	1.84E-2	9.89E-1	2.76E-3	-5.55E+0	5.00E+0
PENRE	MJ	1.79E+2	5.85E-2	1.44E-3	1.79E+2	1.36E+0	1.42E+1	7.64E-2	-9.40E+1	1.01E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.79E+2	5.85E-2	1.44E-3	1.79E+2	1.36E+0	1.42E+1	7.64E-2	-9.40E+1	1.01E+2
PET	MJ	1.89E+2	5.93E-2	2.55E-2	1.89E+2	1.38E+0	1.52E+1	7.92E-2	-9.95E+1	1.06E+2
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	1.15E-1	6.24E-6	1.46E-6	1.15E-1	1.45E-4	1.49E-2	8.89E-5	-5.51E-2	7.49E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.38E-4	1.41E-7	2.73E-13	1.38E-4	3.28E-6	2.15E-5	8.66E-8	-7.32E-5	8.99E-5
NHWD	kg	6.02E-1	3.42E-3	1.05E-6	6.05E-1	7.96E-2	4.76E-1	3.18E-1	-2.80E-1	1.20E+0
RWD	kg	3.14E-4	3.75E-7	1.10E-13	3.14E-4	8.73E-6	5.01E-5	4.70E-7	-1.49E-4	2.24E-4
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