Environmental Profile

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

Ecochain v3.5.80

Product:	3043619 - Stopend ext. KANION PVC70 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	1.02E-1	2.45E-3	1.45E-4	1.04E-1	1.00E-3	1.40E-1	3.26E-4	-5.65E-2	1.90E-1
GWP-f	kg CO2 eq	1.67E-1	2.45E-3	1.46E-4	1.70E-1	1.00E-3	5.89E-2	3.26E-4	-9.00E-2	1.40E-1
GWP-b	kg CO2 eq	-6.57E-2	1.49E-6	-1.54E-6	-6.57E-2	6.07E-7	8.15E-2	3.97E-7	3.38E-2	4.96E-2
GWP-luluc	kg CO2 eq	3.28E-4	8.67E-7	1.49E-7	3.29E-4	3.54E-7	1.35E-5	8.96E-9	-2.96E-4	4.74E-5
ODP	kg CFC11 eq	4.75E-8	5.65E-10	8.26E-12	4.81E-8	2.31E-10	3.94E-9	1.19E-11	-2.69E-8	2.54E-8
AP	mol H+ eq	8.34E-4	1.40E-5	1.47E-6	8.49E-4	5.70E-6	8.12E-5	2.92E-7	-4.06E-4	5.30E-4
EP-fw	kg P eq	7.85E-6	2.02E-8	8.24E-9	7.87E-6	8.23E-9	4.59E-7	3.97E-10	-5.09E-6	3.26E-6
EP-m	kg N eq	1.80E-4	4.99E-6	1.55E-7	1.85E-4	2.04E-6	2.30E-5	1.75E-7	-8.73E-5	1.23E-4
EP-T	mol N eq	1.90E-3	5.50E-5	1.85E-6	1.95E-3	2.25E-5	2.54E-4	1.16E-6	-9.86E-4	1.24E-3
POCP	kg NMVOC eq	6.10E-4	1.57E-5	6.28E-7	6.27E-4	6.42E-6	7.52E-5	4.00E-7	-3.10E-4	3.99E-4
ADP-mm	kg Sb eq	9.98E-5	6.34E-8	1.97E-8	9.99E-5	2.59E-8	3.14E-7	2.98E-10	-1.27E-6	9.90E-5
ADP-f	MJ	3.59E+0	3.76E-2	1.36E-3	3.62E+0	1.54E-2	1.98E-1	8.70E-4	-1.82E+0	2.02E+0
WDP	m3 depriv.	1.65E-1	1.15E-4	5.22E-5	1.65E-1	4.71E-5	6.44E-3	7.81E-6	-1.15E-1	5.70E-2
PM	disease inc.	8.53E-9	2.21E-10	9.08E-12	8.76E-9	9.03E-11	1.05E-9	5.99E-12	-5.65E-9	4.25E-9
IR	kBq U-235 eq	7.45E-3	1.64E-4	1.02E-6	7.61E-3	6.71E-5	7.32E-4	3.96E-6	-4.57E-3	3.85E-3
ETP-fw	CTUe	7.52E+0	3.05E-2	1.21E-2	7.56E+0	1.25E-2	1.26E+0	1.30E-2	-3.55E+0	5.29E+0
HTP-c	CTUh	1.86E-10	1.09E-12	6.17E-13	1.88E-10	4.44E-13	2.78E-11	2.55E-14	-6.80E-11	1.48E-10
HTP-nc	CTUh	4.03E-9	3.64E-11	1.57E-11	4.08E-9	1.49E-11	5.13E-10	2.52E-12	-1.12E-9	3.49E-9
SQP	Pt	7.40E+0	3.22E-2	2.24E-3	7.43E+0	1.31E-2	1.25E-1	2.22E-3	-1.09E+1	-3.34E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.46E+0	5.40E-4	2.40E-2	1.49E+0	2.20E-4	1.26E-2	3.13E-5	-1.85E+0	-3.54E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.46E+0	5.40E-4	2.40E-2	1.49E+0	2.20E-4	1.26E-2	3.13E-5	-1.85E+0	-3.54E-1
PENRE	MJ	3.85E+0	3.99E-2	1.44E-3	3.89E+0	1.63E-2	2.11E-1	9.24E-4	-1.96E+0	2.15E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.85E+0	3.99E-2	1.44E-3	3.89E+0	1.63E-2	2.11E-1	9.24E-4	-1.96E+0	2.15E+0
PET	MJ	5.31E+0	4.05E-2	2.55E-2	5.38E+0	1.65E-2	2.23E-1	9.55E-4	-3.82E+0	1.80E+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	2.59E-3	4.26E-6	1.46E-6	2.59E-3	1.74E-6	1.87E-4	1.06E-6	-2.03E-3	7.51E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.54E-5	9.62E-8	2.73E-13	1.55E-5	3.93E-8	3.69E-7	1.08E-9	-2.33E-6	1.36E-5
NHWD	kg	2.25E-2	2.33E-3	1.05E-6	2.48E-2	9.52E-4	8.85E-3	3.80E-3	-8.97E-3	2.94E-2
RWD	kg	6.93E-6	2.56E-7	1.10E-13	7.19E-6	1.04E-7	8.53E-7	5.63E-9	-4.37E-6	3.78E-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

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