Environmental Profile

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

Ecochain v3.5.80

Product:	3021544 - KANION PVC Stopend int. L 130 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	2.15E-1	4.01E-3	1.45E-4	2.19E-1	2.00E-3	1.93E-1	6.47E-4	-1.15E-1	3.00E-1
GWP-f	kg CO2 eq	2.80E-1	4.01E-3	1.46E-4	2.84E-1	2.00E-3	1.11E-1	6.47E-4	-1.48E-1	2.50E-1
GWP-b	kg CO2 eq	-6.55E-2	2.43E-6	-1.54E-6	-6.55E-2	1.21E-6	8.15E-2	7.94E-7	3.35E-2	4.95E-2
GWP-luluc	kg CO2 eq	4.19E-4	1.42E-6	1.49E-7	4.21E-4	7.07E-7	2.60E-5	1.76E-8	-3.24E-4	1.24E-4
ODP	kg CFC11 eq	9.16E-8	9.23E-10	8.26E-12	9.26E-8	4.60E-10	7.36E-9	2.37E-11	-4.99E-8	5.05E-8
AP	mol H+ eq	1.36E-3	2.28E-5	1.47E-6	1.39E-3	1.14E-5	1.42E-4	5.81E-7	-5.80E-4	9.61E-4
EP-fw	kg P eq	1.25E-5	3.30E-8	8.24E-9	1.25E-5	1.64E-8	8.75E-7	7.83E-10	-6.69E-6	6.73E-6
EP-m	kg N eq	2.72E-4	8.16E-6	1.55E-7	2.80E-4	4.07E-6	3.84E-5	3.51E-7	-1.19E-4	2.04E-4
EP-T	mol N eq	2.89E-3	9.00E-5	1.85E-6	2.98E-3	4.48E-5	4.23E-4	2.31E-6	-1.33E-3	2.12E-3
POCP	kg NMVOC eq	9.74E-4	2.57E-5	6.28E-7	1.00E-3	1.28E-5	1.25E-4	7.96E-7	-4.28E-4	7.11E-4
ADP-mm	kg Sb eq	1.98E-4	1.04E-7	1.97E-8	1.98E-4	5.17E-8	5.43E-7	5.90E-10	-2.15E-6	1.97E-4
ADP-f	MJ	6.47E+0	6.15E-2	1.36E-3	6.53E+0	3.06E-2	3.58E-1	1.73E-3	-3.13E+0	3.79E+0
WDP	m3 depriv.	3.11E-1	1.89E-4	5.22E-5	3.11E-1	9.41E-5	1.27E-2	1.45E-5	-1.78E-1	1.46E-1
PM	disease inc.	1.25E-8	3.62E-10	9.08E-12	1.29E-8	1.80E-10	1.79E-9	1.19E-11	-6.72E-9	8.17E-9
IR	kBq U-235 eq	1.32E-2	2.69E-4	1.02E-6	1.34E-2	1.34E-4	1.29E-3	7.91E-6	-6.64E-3	8.21E-3
ETP-fw	CTUe	1.01E+1	4.99E-2	1.21E-2	1.02E+1	2.49E-2	2.47E+0	2.64E-2	-4.17E+0	8.55E+0
HTP-c	CTUh	2.67E-10	1.78E-12	6.17E-13	2.70E-10	8.86E-13	4.88E-11	5.02E-14	-9.16E-11	2.28E-10
HTP-nc	CTUh	6.59E-9	5.95E-11	1.57E-11	6.67E-9	2.97E-11	9.59E-10	5.10E-12	-1.91E-9	5.74E-9
SQP	Pt	7.81E+0	5.26E-2	2.24E-3	7.87E+0	2.62E-2	2.24E-1	4.43E-3	-1.10E+1	-2.91E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.83E+0	8.82E-4	2.40E-2	1.86E+0	4.40E-4	2.40E-2	6.30E-5	-1.90E+0	-2.06E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.83E+0	8.82E-4	2.40E-2	1.86E+0	4.40E-4	2.40E-2	6.30E-5	-1.90E+0	-2.06E-2
PENRE	MJ	6.93E+0	6.53E-2	1.44E-3	7.00E+0	3.25E-2	3.80E-1	1.84E-3	-3.38E+0	4.04E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.93E+0	6.53E-2	1.44E-3	7.00E+0	3.25E-2	3.80E-1	1.84E-3	-3.38E+0	4.04E+0
PET	MJ	8.77E+0	6.62E-2	2.55E-2	8.86E+0	3.30E-2	4.04E-1	1.90E-3	-5.28E+0	4.02E+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	4.46E-3	6.96E-6	1.46E-6	4.47E-3	3.47E-6	3.62E-4	2.11E-6	-2.70E-3	2.14E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.93E-5	1.57E-7	2.73E-13	2.94E-5	7.84E-8	6.33E-7	2.14E-9	-3.50E-6	2.67E-5
NHWD	kg	3.22E-2	3.81E-3	1.05E-6	3.61E-2	1.90E-3	1.57E-2	7.59E-3	-1.24E-2	4.89E-2
RWD	kg	1.23E-5	4.18E-7	1.10E-13	1.28E-5	2.08E-7	1.46E-6	1.12E-8	-6.23E-6	8.20E-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