Environmental Profile

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

Ecochain v3.5.80

Product:	3024086 - KANION PVC Gutter Union 70 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	2.96E-1	5.63E-3	1.45E-4	3.02E-1	2.90E-3	2.76E-1	9.34E-4	-1.50E-1	4.32E-1
GWP-f	kg CO2 eq	3.93E-1	5.62E-3	1.46E-4	3.99E-1	2.90E-3	1.46E-1	9.34E-4	-2.17E-1	3.32E-1
GWP-b	kg CO2 eq	-9.79E-2	3.41E-6	-1.54E-6	-9.79E-2	1.76E-6	1.30E-1	1.15E-6	6.74E-2	9.92E-2
GWP-luluc	kg CO2 eq	6.78E-4	1.99E-6	1.49E-7	6.80E-4	1.02E-6	3.83E-5	2.52E-8	-6.00E-4	1.19E-4
ODP	kg CFC11 eq	1.34E-7	1.30E-9	8.26E-12	1.35E-7	6.67E-10	1.10E-8	3.44E-11	-7.28E-8	7.42E-8
AP	mol H+ eq	1.89E-3	3.20E-5	1.47E-6	1.92E-3	1.65E-5	2.13E-4	8.40E-7	-9.29E-4	1.22E-3
EP-fw	kg P eq	1.79E-5	4.63E-8	8.24E-9	1.79E-5	2.38E-8	1.29E-6	1.13E-9	-1.14E-5	7.89E-6
EP-m	kg N eq	3.91E-4	1.15E-5	1.55E-7	4.03E-4	5.90E-6	5.82E-5	5.10E-7	-1.92E-4	2.75E-4
EP-T	mol N eq	4.13E-3	1.26E-4	1.85E-6	4.26E-3	6.50E-5	6.41E-4	3.34E-6	-2.15E-3	2.81E-3
POCP	kg NMVOC eq	1.35E-3	3.61E-5	6.28E-7	1.39E-3	1.86E-5	1.90E-4	1.15E-6	-6.80E-4	9.18E-4
ADP-mm	kg Sb eq	8.12E-5	1.45E-7	1.97E-8	8.14E-5	7.49E-8	8.29E-7	8.52E-10	-3.24E-6	7.90E-5
ADP-f	MJ	8.99E+0	8.63E-2	1.36E-3	9.08E+0	4.44E-2	5.35E-1	2.51E-3	-4.55E+0	5.11E+0
WDP	m3 depriv.	4.45E-1	2.65E-4	5.22E-5	4.45E-1	1.36E-4	1.86E-2	2.01E-5	-2.84E-1	1.80E-1
PM	disease inc.	1.81E-8	5.07E-10	9.08E-12	1.87E-8	2.61E-10	2.72E-9	1.73E-11	-1.16E-8	1.00E-8
IR	kBq U-235 eq	1.80E-2	3.77E-4	1.02E-6	1.84E-2	1.94E-4	1.95E-3	1.15E-5	-1.07E-2	9.81E-3
ETP-fw	CTUe	1.50E+1	7.01E-2	1.21E-2	1.51E+1	3.61E-2	3.64E+0	3.86E-2	-7.50E+0	1.13E+1
HTP-c	CTUh	3.79E-10	2.49E-12	6.17E-13	3.82E-10	1.28E-12	7.08E-11	7.21E-14	-1.44E-10	3.10E-10
HTP-nc	CTUh	8.73E-9	8.35E-11	1.57E-11	8.82E-9	4.30E-11	1.41E-9	7.45E-12	-2.89E-9	7.40E-9
SQP	Pt	1.22E+1	7.38E-2	2.24E-3	1.23E+1	3.80E-2	3.34E-1	6.42E-3	-1.96E+1	-6.92E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.78E+0	1.24E-3	2.40E-2	2.81E+0	6.38E-4	3.55E-2	9.18E-5	-3.40E+0	-5.54E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.78E+0	1.24E-3	2.40E-2	2.81E+0	6.38E-4	3.55E-2	9.18E-5	-3.40E+0	-5.54E-1
PENRE	MJ	9.64E+0	9.16E-2	1.44E-3	9.74E+0	4.72E-2	5.69E-1	2.67E-3	-4.90E+0	5.46E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.64E+0	9.16E-2	1.44E-3	9.74E+0	4.72E-2	5.69E-1	2.67E-3	-4.90E+0	5.46E+0
PET	MJ	1.24E+1	9.29E-2	2.55E-2	1.25E+1	4.78E-2	6.05E-1	2.76E-3	-8.30E+0	4.90E+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	6.27E-3	9.77E-6	1.46E-6	6.29E-3	5.03E-6	5.31E-4	3.06E-6	-4.61E-3	2.22E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.67E-5	2.21E-7	2.73E-13	1.70E-5	1.14E-7	9.60E-7	3.09E-9	-5.29E-6	1.28E-5
NHWD	kg	4.90E-2	5.35E-3	1.05E-6	5.43E-2	2.75E-3	2.28E-2	1.10E-2	-1.96E-2	7.13E-2
RWD	kg	1.66E-5	5.87E-7	1.10E-13	1.72E-5	3.02E-7	2.22E-6	1.63E-8	-1.01E-5	9.61E-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

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