Environmental Profile

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

Ecochain v3.5.80

Product:	3021658 - KANION PVC Gutter Uni.+Ins. 130 Graph.
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	7.98E-1	1.02E-2	1.45E-4	8.08E-1	8.42E-3	5.29E-1	2.75E-3	-4.28E-1	9.21E-1
GWP-f	kg CO2 eq	9.25E-1	1.02E-2	1.46E-4	9.35E-1	8.42E-3	3.69E-1	2.75E-3	-4.87E-1	8.28E-1
GWP-b	kg CO2 eq	-1.28E-1	6.18E-6	-1.54E-6	-1.28E-1	5.11E-6	1.60E-1	3.41E-6	6.00E-2	9.19E-2
GWP-luluc	kg CO2 eq	1.10E-3	3.60E-6	1.49E-7	1.11E-3	2.98E-6	1.06E-4	7.28E-8	-7.29E-4	4.87E-4
ODP	kg CFC11 eq	3.72E-7	2.35E-9	8.26E-12	3.75E-7	1.94E-9	2.96E-8	1.01E-10	-1.94E-7	2.13E-7
AP	mol H+ eq	4.46E-3	5.80E-5	1.47E-6	4.52E-3	4.79E-5	5.33E-4	2.46E-6	-1.84E-3	3.27E-3
EP-fw	kg P eq	4.07E-5	8.38E-8	8.24E-9	4.08E-5	6.93E-8	3.56E-6	3.27E-9	-1.97E-5	2.47E-5
EP-m	kg N eq	8.23E-4	2.07E-5	1.55E-7	8.44E-4	1.72E-5	1.37E-4	1.59E-6	-3.55E-4	6.44E-4
EP-T	mol N eq	8.86E-3	2.29E-4	1.85E-6	9.09E-3	1.89E-4	1.51E-3	9.81E-6	-3.88E-3	6.91E-3
POCP	kg NMVOC eq	3.02E-3	6.54E-5	6.28E-7	3.08E-3	5.40E-5	4.48E-4	3.39E-6	-1.29E-3	2.30E-3
ADP-mm	kg Sb eq	5.12E-4	2.63E-7	1.97E-8	5.12E-4	2.18E-7	2.06E-6	2.48E-9	-8.30E-6	5.06E-4
ADP-f	MJ	2.20E+1	1.56E-1	1.36E-3	2.22E+1	1.29E-1	1.39E+0	7.38E-3	-1.09E+1	1.28E+1
WDP	m3 depriv.	1.20E+0	4.80E-4	5.22E-5	1.20E+0	3.96E-4	5.30E-2	5.37E-5	-6.14E-1	6.37E-1
PM	disease inc.	3.66E-8	9.19E-10	9.08E-12	3.75E-8	7.60E-10	6.61E-9	5.08E-11	-1.73E-8	2.76E-8
IR	kBq U-235 eq	4.60E-2	6.83E-4	1.02E-6	4.67E-2	5.65E-4	4.96E-3	3.39E-5	-2.17E-2	3.06E-2
ETP-fw	CTUe	2.70E+1	1.27E-1	1.21E-2	2.71E+1	1.05E-1	1.03E+1	1.13E-1	-1.04E+1	2.73E+1
HTP-c	CTUh	7.79E-10	4.52E-12	6.17E-13	7.84E-10	3.73E-12	1.72E-10	2.08E-13	-2.79E-10	6.82E-10
HTP-nc	CTUh	2.16E-8	1.51E-10	1.57E-11	2.18E-8	1.25E-10	3.77E-9	2.18E-11	-7.43E-9	1.83E-8
SQP	Pt	1.68E+1	1.34E-1	2.24E-3	1.69E+1	1.11E-1	8.59E-1	1.89E-2	-2.15E+1	-3.63E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.10E+0	2.24E-3	2.40E-2	5.12E+0	1.85E-3	9.78E-2	2.74E-4	-3.81E+0	1.42E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.10E+0	2.24E-3	2.40E-2	5.12E+0	1.85E-3	9.78E-2	2.74E-4	-3.81E+0	1.42E+0
PENRE	MJ	2.36E+1	1.66E-1	1.44E-3	2.38E+1	1.37E-1	1.48E+0	7.83E-3	-1.17E+1	1.37E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.36E+1	1.66E-1	1.44E-3	2.38E+1	1.37E-1	1.48E+0	7.83E-3	-1.17E+1	1.37E+1
PET	MJ	2.87E+1	1.68E-1	2.55E-2	2.89E+1	1.39E-1	1.58E+0	8.11E-3	-1.55E+1	1.51E+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	1.54E-2	1.77E-5	1.46E-6	1.54E-2	1.46E-5	1.50E-3	9.02E-6	-7.98E-3	8.98E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.79E-5	4.00E-7	2.73E-13	7.83E-5	3.30E-7	2.36E-6	9.04E-9	-1.07E-5	7.03E-5
NHWD	kg	9.91E-2	9.69E-3	1.05E-6	1.09E-1	8.01E-3	5.64E-2	3.24E-2	-3.84E-2	1.67E-1
RWD	kg	4.25E-5	1.06E-6	1.10E-13	4.35E-5	8.79E-7	5.42E-6	4.79E-8	-1.99E-5	3.00E-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

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