Environmental Profile

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

Ecochain v3.5.80

Product:	3021716 - KANION PVC Pipe Bracket 75 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	1.86E-1	2.65E-3	1.45E-4	1.89E-1	1.71E-3	1.09E-1	5.57E-4	-8.98E-2	2.11E-1
GWP-f	kg CO2 eq	2.17E-1	2.65E-3	1.46E-4	2.20E-1	1.71E-3	6.86E-2	5.56E-4	-1.06E-1	1.85E-1
GWP-b	kg CO2 eq	-3.18E-2	1.61E-6	-1.54E-6	-3.18E-2	1.04E-6	4.07E-2	6.77E-7	1.66E-2	2.56E-2
GWP-luluc	kg CO2 eq	2.67E-4	9.37E-7	1.49E-7	2.68E-4	6.04E-7	2.17E-5	1.53E-8	-1.77E-4	1.14E-4
ODP	kg CFC11 eq	7.56E-8	6.10E-10	8.26E-12	7.62E-8	3.93E-10	6.01E-9	2.03E-11	-3.99E-8	4.27E-8
AP	mol H+ eq	1.08E-3	1.51E-5	1.47E-6	1.10E-3	9.72E-6	1.12E-4	4.98E-7	-4.26E-4	7.95E-4
EP-fw	kg P eq	9.55E-6	2.18E-8	8.24E-9	9.58E-6	1.40E-8	7.30E-7	6.78E-10	-4.68E-6	5.64E-6
EP-m	kg N eq	2.00E-4	5.40E-6	1.55E-7	2.05E-4	3.48E-6	2.90E-5	2.98E-7	-8.29E-5	1.55E-4
EP-T	mol N eq	2.17E-3	5.95E-5	1.85E-6	2.23E-3	3.83E-5	3.20E-4	1.98E-6	-9.15E-4	1.68E-3
POCP	kg NMVOC eq	7.18E-4	1.70E-5	6.28E-7	7.36E-4	1.10E-5	9.52E-5	6.83E-7	-3.19E-4	5.23E-4
ADP-mm	kg Sb eq	5.39E-5	6.85E-8	1.97E-8	5.40E-5	4.42E-8	4.38E-7	5.08E-10	-1.69E-6	5.28E-5
ADP-f	MJ	4.74E+0	4.07E-2	1.36E-3	4.78E+0	2.62E-2	2.90E-1	1.49E-3	-2.27E+0	2.83E+0
WDP	m3 depriv.	2.42E-1	1.25E-4	5.22E-5	2.42E-1	8.04E-5	1.06E-2	1.34E-5	-1.33E-1	1.19E-1
PM	disease inc.	1.00E-8	2.39E-10	9.08E-12	1.03E-8	1.54E-10	1.41E-9	1.02E-11	-4.44E-9	7.42E-9
IR	kBq U-235 eq	1.01E-2	1.78E-4	1.02E-6	1.03E-2	1.15E-4	1.04E-3	6.76E-6	-4.59E-3	6.88E-3
ETP-fw	CTUe	6.60E+0	3.30E-2	1.21E-2	6.65E+0	2.13E-2	2.06E+0	2.22E-2	-2.71E+0	6.03E+0
HTP-c	CTUh	6.39E-10	1.17E-12	6.17E-13	6.41E-10	7.57E-13	3.70E-11	4.36E-14	-6.23E-11	6.16E-10
HTP-nc	CTUh	5.59E-9	3.94E-11	1.57E-11	5.64E-9	2.54E-11	7.75E-10	4.31E-12	-2.61E-10	6.18E-9
SQP	Pt	4.21E+0	3.48E-2	2.24E-3	4.25E+0	2.24E-2	1.85E-1	3.79E-3	-5.60E+0	-1.14E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.15E+0	5.83E-4	2.40E-2	1.17E+0	3.76E-4	2.01E-2	5.34E-5	-9.80E-1	2.10E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.15E+0	5.83E-4	2.40E-2	1.17E+0	3.76E-4	2.01E-2	5.34E-5	-9.80E-1	2.10E-1
PENRE	MJ	5.08E+0	4.32E-2	1.44E-3	5.13E+0	2.78E-2	3.09E-1	1.58E-3	-2.44E+0	3.02E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.08E+0	4.32E-2	1.44E-3	5.13E+0	2.78E-2	3.09E-1	1.58E-3	-2.44E+0	3.02E+0
PET	MJ	6.23E+0	4.38E-2	2.55E-2	6.29E+0	2.82E-2	3.29E-1	1.63E-3	-3.42E+0	3.23E+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	3.26E-3	4.60E-6	1.46E-6	3.27E-3	2.97E-6	2.96E-4	1.80E-6	-1.82E-3	1.75E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.04E-5	1.04E-7	2.73E-13	1.05E-5	6.70E-8	5.01E-7	1.84E-9	-3.04E-6	8.04E-6
NHWD	kg	5.47E-2	2.52E-3	1.05E-6	5.72E-2	1.62E-3	1.18E-2	6.49E-3	-9.10E-3	6.80E-2
RWD	kg	9.21E-6	2.77E-7	1.10E-13	9.49E-6	1.78E-7	1.16E-6	9.61E-9	-4.29E-6	6.54E-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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