Environmental Profile

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

Ecochain v3.5.80

Ecochain

Product:	3021581 - KANION PVC Running Outlet 130/90 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

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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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.60E-1	1.40E-2	1.45E-4	7.74E-1	8.82E-3	6.48E-1	2.88E-3	-4.42E-1	9.92E-1
GWP-f	kg CO2 eq	9.86E-1	1.40E-2	1.46E-4	1.00E+0	8.81E-3	3.72E-1	2.88E-3	-5.37E-1	8.47E-1
GWP-b	kg CO2 eq	-2.27E-1	8.49E-6	-1.54E-6	-2.27E-1	5.35E-6	2.76E-1	3.56E-6	9.57E-2	1.44E-1
GWP-luluc	kg CO2 eq	1.34E-3	4.95E-6	1.49E-7	1.35E-3	3.12E-6	1.12E-4	7.67E-8	-1.03E-3	4.31E-4
ODP	kg CFC11 eq	3.93E-7	3.22E-9	8.26E-12	3.96E-7	2.03E-9	3.15E-8	1.06E-10	-2.06E-7	2.24E-7
AP	mol H+ eq	4.72E-3	7.97E-5	1.47E-6	4.80E-3	5.02E-5	5.77E-4	2.58E-6	-2.18E-3	3.25E-3
EP-fw	kg P eq	4.38E-5	1.15E-7	8.24E-9	4.39E-5	7.25E-8	3.77E-6	3.44E-9	-2.42E-5	2.35E-5
EP-m	kg N eq	9.04E-4	2.85E-5	1.55E-7	9.33E-4	1.80E-5	1.50E-4	1.65E-6	-4.32E-4	6.71E-4
EP-T	mol N eq	9.69E-3	3.14E-4	1.85E-6	1.00E-2	1.98E-4	1.66E-3	1.03E-5	-4.77E-3	7.10E-3
POCP	kg NMVOC eq	3.27E-3	8.98E-5	6.28E-7	3.36E-3	5.66E-5	4.92E-4	3.55E-6	-1.57E-3	2.34E-3
ADP-mm	kg Sb eq	2.26E-4	3.62E-7	1.97E-8	2.26E-4	2.28E-7	2.24E-6	2.61E-9	-9.11E-6	2.19E-4
ADP-f	MJ	2.33E+1	2.15E-1	1.36E-3	2.35E+1	1.35E-1	1.49E+0	7.73E-3	-1.18E+1	1.34E+1
WDP	m3 depriv.	1.25E+0	6.59E-4	5.22E-5	1.25E+0	4.15E-4	5.56E-2	5.82E-5	-6.94E-1	6.12E-1
PM	disease inc.	4.18E-8	1.26E-9	9.08E-12	4.31E-8	7.95E-10	7.22E-9	5.32E-11	-2.32E-8	2.79E-8
IR	kBq U-235 eq	4.80E-2	9.38E-4	1.02E-6	4.90E-2	5.91E-4	5.37E-3	3.54E-5	-2.51E-2	2.98E-2
ETP-fw	CTUe	3.02E+1	1.74E-1	1.21E-2	3.04E+1	1.10E-1	1.08E+1	1.17E-1	-1.40E+1	2.75E+1
HTP-c	CTUh	9.32E-10	6.20E-12	6.17E-13	9.39E-10	3.91E-12	1.86E-10	2.19E-13	-3.44E-10	7.85E-10
HTP-nc	CTUh	2.27E-8	2.08E-10	1.57E-11	2.30E-8	1.31E-10	4.00E-9	2.27E-11	-7.45E-9	1.97E-8
SQP	Pt	2.65E+1	1.84E-1	2.24E-3	2.67E+1	1.16E-1	9.28E-1	1.98E-2	-3.50E+1	-7.19E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.71E+0	3.08E-3	2.40E-2	6.74E+0	1.94E-3	1.04E-1	2.85E-4	-6.04E+0	8.10E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.71E+0	3.08E-3	2.40E-2	6.74E+0	1.94E-3	1.04E-1	2.85E-4	-6.04E+0	8.10E-1
PENRE	MJ	2.50E+1	2.28E-1	1.44E-3	2.52E+1	1.44E-1	1.59E+0	8.20E-3	-1.27E+1	1.43E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.50E+1	2.28E-1	1.44E-3	2.52E+1	1.44E-1	1.59E+0	8.20E-3	-1.27E+1	1.43E+1
PET	MJ	3.17E+1	2.31E-1	2.55E-2	3.19E+1	1.46E-1	1.69E+0	8.49E-3	-1.87E+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	1.61E-2	2.43E-5	1.46E-6	1.62E-2	1.53E-5	1.57E-3	9.43E-6	-9.69E-3	8.07E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.40E-5	5.49E-7	2.73E-13	4.45E-5	3.46E-7	2.58E-6	9.48E-9	-1.27E-5	3.48E-5
NHWD	kg	1.16E-1	1.33E-2	1.05E-6	1.29E-1	8.38E-3	6.02E-2	3.39E-2	-4.70E-2	1.85E-1
RWD	kg	4.44E-5	1.46E-6	1.10E-13	4.58E-5	9.20E-7	5.93E-6	5.02E-8	-2.33E-5	2.94E-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