Environmental Profile

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

Ecochain v3.5.80

Product:	3024192 - KANION PVC Socket Bend 50x67 BN S/PL
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	1.35E-1	3.04E-3	1.45E-4	1.38E-1	1.53E-3	1.52E-1	4.97E-4	-7.74E-2	2.15E-1
GWP-f	kg CO2 eq	2.00E-1	3.04E-3	1.46E-4	2.03E-1	1.53E-3	7.05E-2	4.97E-4	-1.11E-1	1.65E-1
GWP-b	kg CO2 eq	-6.53E-2	1.84E-6	-1.54E-6	-6.53E-2	9.27E-7	8.15E-2	6.06E-7	3.37E-2	4.99E-2
GWP-luluc	kg CO2 eq	3.49E-4	1.07E-6	1.49E-7	3.50E-4	5.40E-7	1.99E-5	1.37E-8	-3.10E-4	6.04E-5
ODP	kg CFC11 eq	6.92E-8	7.00E-10	8.26E-12	7.00E-8	3.52E-10	5.67E-9	1.81E-11	-3.80E-8	3.79E-8
AP	mol H+ eq	9.70E-4	1.73E-5	1.47E-6	9.88E-4	8.70E-6	1.10E-4	4.45E-7	-4.90E-4	6.18E-4
EP-fw	kg P eq	9.15E-6	2.50E-8	8.24E-9	9.19E-6	1.26E-8	6.71E-7	6.05E-10	-5.91E-6	3.96E-6
EP-m	kg N eq	2.01E-4	6.19E-6	1.55E-7	2.08E-4	3.11E-6	3.00E-5	2.67E-7	-1.02E-4	1.39E-4
EP-T	mol N eq	2.13E-3	6.82E-5	1.85E-6	2.20E-3	3.43E-5	3.30E-4	1.77E-6	-1.14E-3	1.43E-3
POCP	kg NMVOC eq	6.93E-4	1.95E-5	6.28E-7	7.13E-4	9.80E-6	9.81E-5	6.10E-7	-3.63E-4	4.59E-4
ADP-mm	kg Sb eq	5.28E-5	7.85E-8	1.97E-8	5.29E-5	3.95E-8	4.29E-7	4.54E-10	-1.72E-6	5.17E-5
ADP-f	MJ	4.53E+0	4.66E-2	1.36E-3	4.58E+0	2.34E-2	2.78E-1	1.33E-3	-2.34E+0	2.55E+0
WDP	m3 depriv.	2.26E-1	1.43E-4	5.22E-5	2.26E-1	7.19E-5	9.63E-3	1.18E-5	-1.47E-1	8.89E-2
PM	disease inc.	9.47E-9	2.74E-10	9.08E-12	9.76E-9	1.38E-10	1.41E-9	9.15E-12	-6.18E-9	5.13E-9
IR	kBq U-235 eq	9.26E-3	2.04E-4	1.02E-6	9.46E-3	1.02E-4	1.01E-3	6.05E-6	-5.61E-3	4.98E-3
ETP-fw	CTUe	7.73E+0	3.78E-2	1.21E-2	7.78E+0	1.90E-2	1.88E+0	1.99E-2	-3.86E+0	5.83E+0
HTP-c	CTUh	2.04E-10	1.35E-12	6.17E-13	2.06E-10	6.77E-13	3.70E-11	3.89E-14	-7.97E-11	1.64E-10
HTP-nc	CTUh	4.58E-9	4.51E-11	1.57E-11	4.65E-9	2.27E-11	7.28E-10	3.86E-12	-1.53E-9	3.87E-9
SQP	Pt	7.50E+0	3.99E-2	2.24E-3	7.54E+0	2.00E-2	1.74E-1	3.39E-3	-1.10E+1	-3.23E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.60E+0	6.69E-4	2.40E-2	1.62E+0	3.36E-4	1.84E-2	4.78E-5	-1.88E+0	-2.38E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.60E+0	6.69E-4	2.40E-2	1.62E+0	3.36E-4	1.84E-2	4.78E-5	-1.88E+0	-2.38E-1
PENRE	MJ	4.86E+0	4.95E-2	1.44E-3	4.91E+0	2.49E-2	2.96E-1	1.41E-3	-2.52E+0	2.72E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.86E+0	4.95E-2	1.44E-3	4.91E+0	2.49E-2	2.96E-1	1.41E-3	-2.52E+0	2.72E+0
PET	MJ	6.46E+0	5.01E-2	2.55E-2	6.54E+0	2.52E-2	3.14E-1	1.46E-3	-4.40E+0	2.48E+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	3.17E-3	5.27E-6	1.46E-6	3.18E-3	2.65E-6	2.74E-4	1.61E-6	-2.37E-3	1.09E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.01E-5	1.19E-7	2.73E-13	1.02E-5	5.99E-8	4.98E-7	1.65E-9	-2.76E-6	8.03E-6
NHWD	kg	2.56E-2	2.89E-3	1.05E-6	2.85E-2	1.45E-3	1.16E-2	5.81E-3	-1.07E-2	3.67E-2
RWD	kg	8.57E-6	3.17E-7	1.10E-13	8.89E-6	1.59E-7	1.15E-6	8.59E-9	-5.28E-6	4.93E-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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