Environmental Profile

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

Ecochain v3.5.80

Product:	3021589 - KANION PVC Socket Bend 75x67 BK 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	2.68E-1	4.77E-3	1.45E-4	2.73E-1	2.66E-3	2.12E-1	8.55E-4	-1.43E-1	3.45E-1
GWP-f	kg CO2 eq	3.33E-1	4.77E-3	1.46E-4	3.38E-1	2.65E-3	1.30E-1	8.55E-4	-1.76E-1	2.95E-1
GWP-b	kg CO2 eq	-6.50E-2	2.89E-6	-1.54E-6	-6.50E-2	1.61E-6	8.15E-2	1.06E-6	3.33E-2	4.99E-2
GWP-luluc	kg CO2 eq	4.65E-4	1.69E-6	1.49E-7	4.67E-4	9.40E-7	3.43E-5	2.30E-8	-3.42E-4	1.60E-4
ODP	kg CFC11 eq	1.20E-7	1.10E-9	8.26E-12	1.21E-7	6.12E-10	9.64E-9	3.15E-11	-6.41E-8	6.74E-8
AP	mol H+ eq	1.61E-3	2.72E-5	1.47E-6	1.64E-3	1.51E-5	1.80E-4	7.70E-7	-6.87E-4	1.15E-3
EP-fw	kg P eq	1.49E-5	3.92E-8	8.24E-9	1.50E-5	2.18E-8	1.15E-6	1.03E-9	-7.73E-6	8.43E-6
EP-m	kg N eq	3.14E-4	9.72E-6	1.55E-7	3.24E-4	5.41E-6	4.75E-5	4.69E-7	-1.38E-4	2.40E-4
EP-T	mol N eq	3.35E-3	1.07E-4	1.85E-6	3.46E-3	5.96E-5	5.23E-4	3.06E-6	-1.52E-3	2.52E-3
POCP	kg NMVOC eq	1.13E-3	3.06E-5	6.28E-7	1.16E-3	1.70E-5	1.55E-4	1.06E-6	-4.96E-4	8.36E-4
ADP-mm	kg Sb eq	2.48E-4	1.23E-7	1.97E-8	2.48E-4	6.87E-8	6.93E-7	7.80E-10	-2.72E-6	2.46E-4
ADP-f	MJ	7.77E+0	7.32E-2	1.36E-3	7.85E+0	4.08E-2	4.61E-1	2.30E-3	-3.81E+0	4.54E+0
WDP	m3 depriv.	3.97E-1	2.25E-4	5.22E-5	3.97E-1	1.25E-4	1.69E-2	1.81E-5	-2.18E-1	1.96E-1
PM	disease inc.	1.41E-8	4.30E-10	9.08E-12	1.46E-8	2.40E-10	2.25E-9	1.59E-11	-7.40E-9	9.69E-9
IR	kBq U-235 eq	1.61E-2	3.20E-4	1.02E-6	1.64E-2	1.78E-4	1.66E-3	1.05E-5	-7.95E-3	1.03E-2
ETP-fw	CTUe	1.15E+1	5.94E-2	1.21E-2	1.16E+1	3.31E-2	3.29E+0	3.55E-2	-4.56E+0	1.04E+1
HTP-c	CTUh	3.14E-10	2.11E-12	6.17E-13	3.17E-10	1.18E-12	6.01E-11	6.58E-14	-1.07E-10	2.72E-10
HTP-nc	CTUh	8.10E-9	7.08E-11	1.57E-11	8.18E-9	3.94E-11	1.24E-9	6.85E-12	-2.43E-9	7.04E-9
SQP	Pt	8.01E+0	6.26E-2	2.24E-3	8.07E+0	3.49E-2	2.87E-1	5.89E-3	-1.11E+1	-2.70E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.07E+0	1.05E-3	2.40E-2	2.10E+0	5.85E-4	3.16E-2	8.43E-5	-1.93E+0	1.97E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.07E+0	1.05E-3	2.40E-2	2.10E+0	5.85E-4	3.16E-2	8.43E-5	-1.93E+0	1.97E-1
PENRE	MJ	8.34E+0	7.77E-2	1.44E-3	8.42E+0	4.33E-2	4.90E-1	2.44E-3	-4.11E+0	4.84E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.34E+0	7.77E-2	1.44E-3	8.42E+0	4.33E-2	4.90E-1	2.44E-3	-4.11E+0	4.84E+0
PET	MJ	1.04E+1	7.87E-2	2.55E-2	1.05E+1	4.38E-2	5.22E-1	2.53E-3	-6.04E+0	5.04E+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	5.41E-3	8.28E-6	1.46E-6	5.42E-3	4.61E-6	4.76E-4	2.81E-6	-3.12E-3	2.79E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.64E-5	1.87E-7	2.73E-13	3.66E-5	1.04E-7	7.99E-7	2.83E-9	-4.07E-6	3.35E-5
NHWD	kg	3.75E-2	4.54E-3	1.05E-6	4.20E-2	2.53E-3	1.95E-2	1.01E-2	-1.45E-2	5.96E-2
RWD	kg	1.49E-5	4.98E-7	1.10E-13	1.54E-5	2.77E-7	1.84E-6	1.49E-8	-7.39E-6	1.01E-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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