Environmental Profile

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

Ecochain v3.5.80

Product:	3024043 - KANION PVC Socket Bend 50x67 Graph. S/S
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	1.52E-1	3.18E-3	1.45E-4	1.55E-1	1.63E-3	1.55E-1	5.26E-4	-8.15E-2	2.31E-1
GWP-f	kg CO2 eq	2.17E-1	3.18E-3	1.46E-4	2.20E-1	1.63E-3	7.34E-2	5.26E-4	-1.15E-1	1.81E-1
GWP-b	kg CO2 eq	-6.51E-2	1.93E-6	-1.54E-6	-6.51E-2	9.91E-7	8.15E-2	6.51E-7	3.37E-2	5.01E-2
GWP-luluc	kg CO2 eq	3.68E-4	1.12E-6	1.49E-7	3.70E-4	5.78E-7	2.14E-5	1.42E-8	-3.13E-4	7.87E-5
ODP	kg CFC11 eq	7.41E-8	7.32E-10	8.26E-12	7.48E-8	3.76E-10	6.12E-9	1.94E-11	-4.03E-8	4.11E-8
AP	mol H+ eq	1.07E-3	1.81E-5	1.47E-6	1.09E-3	9.30E-6	1.17E-4	4.74E-7	-5.06E-4	7.13E-4
EP-fw	kg P eq	1.01E-5	2.62E-8	8.24E-9	1.02E-5	1.34E-8	7.24E-7	6.34E-10	-6.08E-6	4.83E-6
EP-m	kg N eq	2.20E-4	6.48E-6	1.55E-7	2.27E-4	3.33E-6	3.16E-5	2.88E-7	-1.04E-4	1.58E-4
EP-T	mol N eq	2.32E-3	7.14E-5	1.85E-6	2.40E-3	3.67E-5	3.48E-4	1.88E-6	-1.17E-3	1.62E-3
POCP	kg NMVOC eq	7.52E-4	2.04E-5	6.28E-7	7.73E-4	1.05E-5	1.03E-4	6.50E-7	-3.73E-4	5.15E-4
ADP-mm	kg Sb eq	1.49E-4	8.22E-8	1.97E-8	1.49E-4	4.22E-8	4.57E-7	4.80E-10	-1.82E-6	1.48E-4
ADP-f	MJ	4.76E+0	4.88E-2	1.36E-3	4.81E+0	2.51E-2	2.97E-1	1.42E-3	-2.44E+0	2.70E+0
WDP	m3 depriv.	2.44E-1	1.50E-4	5.22E-5	2.44E-1	7.69E-5	1.04E-2	1.13E-5	-1.54E-1	1.01E-1
PM	disease inc.	1.00E-8	2.87E-10	9.08E-12	1.03E-8	1.47E-10	1.49E-9	9.76E-12	-6.29E-9	5.69E-9
IR	kBq U-235 eq	1.01E-2	2.13E-4	1.02E-6	1.03E-2	1.09E-4	1.08E-3	6.47E-6	-5.81E-3	5.68E-3
ETP-fw	CTUe	8.77E+0	3.96E-2	1.21E-2	8.82E+0	2.03E-2	2.04E+0	2.18E-2	-3.92E+0	6.98E+0
HTP-c	CTUh	2.30E-10	1.41E-12	6.17E-13	2.32E-10	7.24E-13	3.83E-11	4.06E-14	-8.21E-11	1.89E-10
HTP-nc	CTUh	5.43E-9	4.72E-11	1.57E-11	5.50E-9	2.43E-11	7.80E-10	4.20E-12	-1.61E-9	4.70E-9
SQP	Pt	7.56E+0	4.17E-2	2.24E-3	7.61E+0	2.14E-2	1.85E-1	3.62E-3	-1.10E+1	-3.17E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.68E+0	7.00E-4	2.40E-2	1.71E+0	3.59E-4	1.99E-2	5.18E-5	-1.88E+0	-1.57E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.68E+0	7.00E-4	2.40E-2	1.71E+0	3.59E-4	1.99E-2	5.18E-5	-1.88E+0	-1.57E-1
PENRE	MJ	5.11E+0	5.18E-2	1.44E-3	5.16E+0	2.66E-2	3.16E-1	1.50E-3	-2.63E+0	2.88E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.11E+0	5.18E-2	1.44E-3	5.16E+0	2.66E-2	3.16E-1	1.50E-3	-2.63E+0	2.88E+0
PET	MJ	6.79E+0	5.25E-2	2.55E-2	6.87E+0	2.70E-2	3.35E-1	1.56E-3	-4.51E+0	2.72E+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	3.43E-3	5.52E-6	1.46E-6	3.43E-3	2.83E-6	2.96E-4	1.73E-6	-2.44E-3	1.30E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.25E-5	1.25E-7	2.73E-13	2.26E-5	6.41E-8	5.27E-7	1.74E-9	-2.84E-6	2.04E-5
NHWD	kg	2.71E-2	3.02E-3	1.05E-6	3.01E-2	1.55E-3	1.22E-2	6.21E-3	-1.10E-2	3.91E-2
RWD	kg	9.23E-6	3.32E-7	1.10E-13	9.56E-6	1.70E-7	1.22E-6	9.19E-9	-5.46E-6	5.50E-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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