Environmental Profile

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

Ecochain v3.5.80

Ecochain

Product:	3021496 - KANION PVC Socket Bend 75x67 BK 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

WAVIN An Orbia business.

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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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.51E-1	5.48E-3	1.45E-4	3.56E-1	3.71E-3	2.38E-1	1.19E-3	-1.86E-1	4.13E-1
GWP-f	kg CO2 eq	4.14E-1	5.48E-3	1.46E-4	4.20E-1	3.71E-3	1.56E-1	1.19E-3	-2.19E-1	3.62E-1
GWP-b	kg CO2 eq	-6.41E-2	3.33E-6	-1.54E-6	-6.41E-2	2.25E-6	8.14E-2	1.48E-6	3.30E-2	5.04E-2
GWP-luluc	kg CO2 eq	5.29E-4	1.94E-6	1.49E-7	5.31E-4	1.31E-6	4.74E-5	3.19E-8	-3.71E-4	2.09E-4
ODP	kg CFC11 eq	1.65E-7	1.26E-9	8.26E-12	1.67E-7	8.54E-10	1.33E-8	4.40E-11	-8.65E-8	9.42E-8
AP	mol H+ eq	2.00E-3	3.12E-5	1.47E-6	2.03E-3	2.11E-5	2.40E-4	1.07E-6	-8.55E-4	1.44E-3
EP-fw	kg P eq	1.86E-5	4.51E-8	8.24E-9	1.86E-5	3.05E-8	1.59E-6	1.43E-9	-9.39fw-6	1.09E-5
EP-m	kg N eq	3.78E-4	1.12E-5	1.55E-7	3.90E-4	7.56E-6	6.18E-5	6.56E-7	-1.66E-4	2.93E-4
EP-T	mol N eq	4.04E-3	1.23E-4	1.85E-6	4.16E-3	8.33E-5	6.81E-4	4.27E-6	-1.83E-3	3.10E-3
POCP	kg NMVOC eq	1.36E-3	3.52E-5	6.28E-7	1.39E-3	2.38E-5	2.03E-4	1.47E-6	-6.03E-4	1.02E-3
ADP-mm	kg Sb eq	2.98E-4	1.42E-7	1.97E-8	2.98E-4	9.59E-8	9.31E-7	1.08E-9	-3.64E-6	2.96E-4
ADP-f	MJ	9.81E+0	8.41E-2	1.36E-3	9.89E+0	5.69E-2	6.25E-1	3.22E-3	-4.87E+0	5.71E+0
WDP	m3 depriv.	5.27E-1	2.58E-4	5.22E-5	5.27E-1	1.75E-4	2.35E-2	2.41E-5	-2.83E-1	2.68E-1
PM	disease inc.	1.68E-8	4.94E-10	9.08E-12	1.73E-8	3.35E-10	2.99E-9	2.21E-11	-8.47E-9	1.22E-8
IR	kBq U-235 eq	2.07E-2	3.68E-4	1.02E-6	2.11E-2	2.49E-4	2.24E-3	1.47E-5	-1.00E-2	1.35E-2
ETP-fw	CTUe	1.33E+1	6.83E-2	1.21E-2	1.34E+1	4.62E-2	4.60E+0	5.00E-2	-5.18E+0	1.29E+1
HTP-c	CTUh	3.77E-10	2.43E-12	6.17E-13	3.80E-10	1.64E-12	7.81E-11	9.11E-14	-1.30E-10	3.30E-10
HTP-nc	CTUh	1.02E-8	8.14E-11	1.57E-11	1.03E-8	5.51E-11	1.69E-9	9.63E-12	-3.25E-9	8.78E-9
SQP	Pt	8.28E+0	7.19E-2	2.24E-3	8.35E+0	4.87E-2	3.87E-1	8.22E-3	-1.12E+1	-2.42E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.35E+0	1.21E-3	2.40E-2	2.37E+0	8.16E-4	4.37E-2	1.18E-4	-1.98E+0	4.38E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.35E+0	1.21E-3	2.40E-2	2.37E+0	8.16E-4	4.37E-2	1.18E-4	-1.98E+0	4.38E-1
PENRE	MJ	1.05E+1	8.93E-2	1.44E-3	1.06E+1	6.04E-2	6.65E-1	3.41E-3	-5.25E+0	6.09E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.05E+1	8.93E-2	1.44E-3	1.06E+1	6.04E-2	6.65E-1	3.41E-3	-5.25E+0	6.09E+0
PET	MJ	1.29E+1	9.05E-2	2.55E-2	1.30E+1	6.12E-2	7.09E-1	3.53E-3	-7.23E+0	6.53E+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	6.80E-3	9.51E-6	1.46E-6	6.81E-3	6.44E-6	6.57E-4	3.92E-6	-3.80E-3	3.68E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.41E-5	2.15E-7	2.73E-13	4.43E-5	1.46E-7	1.06E-6	3.94E-9	-4.93E-6	4.06E-5
NHWD	kg	4.50E-2	5.21E-3	1.05E-6	5.02E-2	3.53E-3	2.52E-2	1.41E-2	-1.80E-2	7.51E-2
RWD	kg	1.91E-5	5.72E-7	1.10E-13	1.97E-5	3.87E-7	2.46E-6	2.09E-8	-9.22E-6	1.34E-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