Environmental Profile

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

Ecochain v3.5.80

Product:	3021500 - KANION PVC Socket Bend 75x67 BN 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	3.36E-1	5.58E-3	1.45E-4	3.42E-1	3.95E-3	2.26E-1	1.27E-3	-1.85E-1	3.88E-1
GWP-f	kg CO2 eq	4.00E-1	5.57E-3	1.46E-4	4.05E-1	3.94E-3	1.45E-1	1.27E-3	-2.18E-1	3.37E-1
GWP-b	kg CO2 eq	-6.37E-2	3.38E-6	-1.54E-6	-6.36E-2	2.40E-6	8.14E-2	1.57E-6	3.30E-2	5.08E-2
GWP-luluc	kg CO2 eq	5.07E-4	1.97E-6	1.49E-7	5.09E-4	1.40E-6	4.99E-5	3.43E-8	-3.77E-4	1.83E-4
ODP	kg CFC11 eq	1.72E-7	1.28E-9	8.26E-12	1.73E-7	9.09E-10	1.39E-8	4.68E-11	-9.05E-8	9.75E-8
AP	mol H+ eq	1.90E-3	3.17E-5	1.47E-6	1.94E-3	2.25E-5	2.49E-4	1.14E-6	-8.84E-4	1.33E-3
EP-fw	kg P eq	1.78E-5	4.58E-8	8.24E-9	1.79E-5	3.25E-8	1.67E-6	1.53E-9	-9.73E-6	9.84E-6
EP-m	kg N eq	3.55E-4	1.14E-5	1.55E-7	3.67E-4	8.04E-6	6.36E-5	6.96E-7	-1.70E-4	2.69E-4
EP-T	mol N eq	3.82E-3	1.25E-4	1.85E-6	3.95E-3	8.86E-5	7.01E-4	4.55E-6	-1.87E-3	2.88E-3
POCP	kg NMVOC eq	1.27E-3	3.58E-5	6.28E-7	1.31E-3	2.53E-5	2.09E-4	1.57E-6	-6.16E-4	9.25E-4
ADP-mm	kg Sb eq	1.07E-4	1.44E-7	1.97E-8	1.07E-4	1.02E-7	9.75E-7	1.16E-9	-3.84E-6	1.05E-4
ADP-f	MJ	9.51E+0	8.55E-2	1.36E-3	9.59E+0	6.05E-2	6.56E-1	3.42E-3	-4.92E+0	5.40E+0
WDP	m3 depriv.	5.40E-1	2.62E-4	5.22E-5	5.41E-1	1.86E-4	2.48E-2	2.70E-5	-2.97E-1	2.69E-1
PM	disease inc.	1.57E-8	5.03E-10	9.08E-12	1.62E-8	3.56E-10	3.12E-9	2.36E-11	-8.67E-9	1.10E-8
IR	kBq U-235 eq	1.96E-2	3.74E-4	1.02E-6	1.99E-2	2.65E-4	2.34E-3	1.56E-5	-1.04E-2	1.21E-2
ETP-fw	CTUe	1.17E+1	6.94E-2	1.21E-2	1.18E+1	4.92E-2	4.83E+0	5.27E-2	-5.30E+0	1.14E+1
HTP-c	CTUh	3.53E-10	2.47E-12	6.17E-13	3.56E-10	1.75E-12	8.06E-11	9.79E-14	-1.35E-10	3.04E-10
HTP-nc	CTUh	9.33E-9	8.28E-11	1.57E-11	9.43E-9	5.86E-11	1.76E-9	1.02E-11	-3.44E-9	7.82E-9
SQP	Pt	8.20E+0	7.32E-2	2.24E-3	8.28E+0	5.18E-2	4.06E-1	8.75E-3	-1.12E+1	-2.49E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.43E+0	1.23E-3	2.40E-2	2.45E+0	8.69E-4	4.60E-2	1.25E-4	-1.99E+0	5.13E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.43E+0	1.23E-3	2.40E-2	2.45E+0	8.69E-4	4.60E-2	1.25E-4	-1.99E+0	5.13E-1
PENRE	MJ	1.02E+1	9.08E-2	1.44E-3	1.03E+1	6.43E-2	6.98E-1	3.63E-3	-5.30E+0	5.76E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.02E+1	9.08E-2	1.44E-3	1.03E+1	6.43E-2	6.98E-1	3.63E-3	-5.30E+0	5.76E+0
PET	MJ	1.26E+1	9.20E-2	2.55E-2	1.27E+1	6.52E-2	7.44E-1	3.76E-3	-7.29E+0	6.27E+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	6.69E-3	9.68E-6	1.46E-6	6.70E-3	6.85E-6	6.88E-4	4.17E-6	-3.93E-3	3.47E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.01E-5	2.19E-7	2.73E-13	2.03E-5	1.55E-7	1.11E-6	4.21E-9	-4.91E-6	1.67E-5
NHWD	kg	4.50E-2	5.30E-3	1.05E-6	5.03E-2	3.75E-3	2.56E-2	1.50E-2	-1.87E-2	7.60E-2
RWD	kg	1.76E-5	5.82E-7	1.10E-13	1.82E-5	4.12E-7	2.57E-6	2.22E-8	-9.55E-6	1.17E-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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