Environmental Profile

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

Ecochain v3.5.80

Product:	3024166 - KANION PVC Reducer 110/50 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	4.94E-1	9.89E-3	1.75E-3	5.05E-1	4.77E-3	3.00E-1	1.56E-3	-1.99E-1	6.12E-1
GWP-f	kg CO2 eq	5.54E-1	9.88E-3	1.77E-3	5.66E-1	4.76E-3	1.88E-1	1.56E-3	-3.00E-1	4.60E-1
GWP-b	kg CO2 eq	-6.15E-2	6.00E-6	-1.87E-5	-6.15E-2	2.89E-6	1.12E-1	1.89E-6	1.02E-1	1.52E-1
GWP-luluc	kg CO2 eq	9.64E-4	3.50E-6	1.81E-6	9.69E-4	1.69E-6	6.09E-5	4.30E-8	-8.83E-4	1.49E-4
ODP	kg CFC11 eq	2.11E-7	2.28E-9	9.99E-11	2.13E-7	1.10E-9	1.72E-8	5.66E-11	-1.14E-7	1.17E-7
AP	mol H+ eq	2.68E-3	5.63E-5	1.78E-5	2.75E-3	2.71E-5	3.27E-4	1.39E-6	-1.35E-3	1.76E-3
EP-fw	kg P eq	2.56E-5	8.13E-8	9.96E-8	2.58E-5	3.92E-8	2.05E-6	1.90E-9	-1.70E-5	1.08E-5
EP-m	kg N eq	5.46E-4	2.01E-5	1.88E-6	5.68E-4	9.71E-6	8.74E-5	8.31E-7	-2.71E-4	3.96E-4
EP-T	mol N eq	5.76E-3	2.22E-4	2.24E-5	6.00E-3	1.07E-4	9.62E-4	5.52E-6	-3.01E-3	4.07E-3
POCP	kg NMVOC eq	1.80E-3	6.35E-5	7.59E-6	1.87E-3	3.06E-5	2.87E-4	1.91E-6	-9.25E-4	1.26E-3
ADP-mm	kg Sb eq	1.83E-4	2.56E-7	2.38E-7	1.83E-4	1.23E-7	1.29E-6	1.42E-9	-5.02E-6	1.80E-4
ADP-f	MJ	1.26E+1	1.52E-1	1.64E-2	1.28E+1	7.31E-2	8.40E-1	4.15E-3	-6.57E+0	7.15E+0
WDP	m3 depriv.	6.68E-1	4.66E-4	6.31E-4	6.69E-1	2.24E-4	2.97E-2	3.81E-5	-4.47E-1	2.52E-1
PM	disease inc.	2.41E-8	8.92E-10	1.10E-10	2.51E-8	4.30E-10	4.19E-9	2.86E-11	-1.61E-8	1.37E-8
IR	kBq U-235 eq	2.65E-2	6.63E-4	1.23E-5	2.71E-2	3.20E-4	3.04E-3	1.89E-5	-1.64E-2	1.41E-2
ETP-fw	CTUe	2.25E+1	1.23E-1	1.46E-1	2.28E+1	5.94E-2	5.77E+0	6.16E-2	-1.10E+1	1.76E+1
HTP-c	CTUh	4.66E-10	4.38E-12	7.46E-12	4.78E-10	2.11E-12	1.09E-10	1.22E-13	-1.94E-10	3.95E-10
HTP-nc	CTUh	1.24E-8	1.47E-10	1.89E-10	1.28E-8	7.08E-11	2.19E-9	1.20E-11	-5.41E-9	9.65E-9
SQP	Pt	1.13E+1	1.30E-1	2.71E-2	1.15E+1	6.26E-2	5.19E-1	1.06E-2	-2.38E+1	-1.17E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.48E+0	2.18E-3	2.91E-1	3.78E+0	1.05E-3	5.62E-2	1.49E-4	-4.28E+0	-4.44E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.48E+0	2.18E-3	2.91E-1	3.78E+0	1.05E-3	5.62E-2	1.49E-4	-4.28E+0	-4.44E-1
PENRE	MJ	1.36E+1	1.61E-1	1.75E-2	1.37E+1	7.76E-2	8.93E-1	4.40E-3	-7.07E+0	7.64E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.36E+1	1.61E-1	1.75E-2	1.37E+1	7.76E-2	8.93E-1	4.40E-3	-7.07E+0	7.64E+0
PET	MJ	1.70E+1	1.63E-1	3.08E-1	1.75E+1	7.87E-2	9.50E-1	4.55E-3	-1.13E+1	7.19E+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	9.00E-3	1.72E-5	1.76E-5	9.04E-3	8.28E-6	8.36E-4	5.03E-6	-7.06E-3	2.82E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.20E-5	3.88E-7	3.30E-12	3.24E-5	1.87E-7	1.48E-6	5.15E-9	-6.70E-6	2.74E-5
NHWD	kg	6.52E-2	9.40E-3	1.27E-5	7.46E-2	4.53E-3	3.36E-2	1.81E-2	-2.69E-2	1.04E-1
RWD	kg	2.43E-5	1.03E-6	1.33E-12	2.53E-5	4.97E-7	3.42E-6	2.68E-8	-1.51E-5	1.42E-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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