Environmental Profile

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

Ecochain v3.5.80

Product:	3024165 - KANION PVC Reducer 110/50 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

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	5.48E-1	1.04E-2	1.46E-4	5.59E-1	4.74E-3	3.36E-1	1.54E-3	-2.20E-1	6.81E-1
GWP-f	kg CO2 eq	6.09E-1	1.04E-2	1.47E-4	6.20E-1	4.74E-3	2.24E-1	1.54E-3	-3.21E-1	5.29E-1
GWP-b	kg CO2 eq	-6.19E-2	6.31E-6	-1.55E-6	-6.19E-2	2.88E-6	1.12E-1	1.88E-6	1.02E-1	1.52E-1
GWP-luluc	kg CO2 eq	1.03E-3	3.68E-6	1.50E-7	1.04E-3	1.68E-6	6.14E-5	4.19E-8	-8.83E-4	2.16E-4
ODP	kg CFC11 eq	2.16E-7	2.39E-9	8.32E-12	2.18E-7	1.09E-9	1.75E-8	5.62E-11	-1.16E-7	1.21E-7
AP	mol H+ eq	2.95E-3	5.92E-5	1.49E-6	3.01E-3	2.70E-5	3.34E-4	1.38E-6	-1.36E-3	2.01E-3
EP-fw	kg P eq	2.83E-5	8.55E-8	8.30E-9	2.84E-5	3.90E-8	2.07E-6	1.86E-9	-1.71E-5	1.34E-5
EP-m	kg N eq	6.10E-4	2.12E-5	1.56E-7	6.32E-4	9.66E-6	9.00E-5	8.31E-7	-2.76E-4	4.56E-4
EP-T	mol N eq	6.39E-3	2.33E-4	1.87E-6	6.63E-3	1.06E-4	9.90E-4	5.48E-6	-3.06E-3	4.67E-3
POCP	kg NMVOC eq	2.04E-3	6.67E-5	6.32E-7	2.10E-3	3.04E-5	2.95E-4	1.89E-6	-9.44E-4	1.49E-3
ADP-mm	kg Sb eq	5.89E-4	2.69E-7	1.98E-8	5.89E-4	1.23E-7	1.30E-6	1.40E-9	-5.01E-6	5.85E-4
ADP-f	MJ	1.40E+1	1.59E-1	1.37E-3	1.41E+1	7.27E-2	8.48E-1	4.12E-3	-6.93E+0	8.13E+0
WDP	m3 depriv.	7.00E-1	4.89E-4	5.26E-5	7.00E-1	2.23E-4	3.00E-2	3.51E-5	-4.48E-1	2.83E-1
PM	disease inc.	2.66E-8	9.38E-10	9.15E-12	2.76E-8	4.28E-10	4.25E-9	2.84E-11	-1.61E-8	1.62E-8
IR	kBq U-235 eq	3.04E-2	6.97E-4	1.03E-6	3.10E-2	3.18E-4	3.07E-3	1.88E-5	-1.65E-2	1.80E-2
ETP-fw	CTUe	2.59E+1	1.29E-1	1.22E-2	2.61E+1	5.91E-2	5.85E+0	6.23E-2	-1.11E+1	2.10E+1
HTP-c	CTUh	5.14E-10	4.61E-12	6.21E-13	5.19E-10	2.10E-12	1.12E-10	1.20E-13	-1.95E-10	4.39E-10
HTP-nc	CTUh	1.43E-8	1.54E-10	1.58E-11	1.45E-8	7.04E-11	2.24E-9	1.21E-11	-5.42E-9	1.14E-8
SQP	Pt	1.15E+1	1.36E-1	2.26E-3	1.16E+1	6.22E-2	5.24E-1	1.05E-2	-2.38E+1	-1.15E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.27E+0	2.29E-3	2.42E-2	2.30E+0	1.04E-3	5.67E-2	1.49E-4	-4.28E+0	-1.92E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.27E+0	2.29E-3	2.42E-2	2.30E+0	1.04E-3	5.67E-2	1.49E-4	-4.28E+0	-1.92E+0
PENRE	MJ	1.50E+1	1.69E-1	1.45E-3	1.52E+1	7.72E-2	9.02E-1	4.37E-3	-7.47E+0	8.67E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.50E+1	1.69E-1	1.45E-3	1.52E+1	7.72E-2	9.02E-1	4.37E-3	-7.47E+0	8.67E+0
PET	MJ	1.73E+1	1.72E-1	2.57E-2	1.75E+1	7.83E-2	9.59E-1	4.52E-3	-1.17E+1	6.75E+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	9.83E-3	1.80E-5	1.47E-6	9.85E-3	8.23E-6	8.50E-4	5.01E-6	-7.08E-3	3.63E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.39E-5	4.08E-7	2.75E-13	8.43E-5	1.86E-7	1.50E-6	5.09E-9	-7.11E-6	7.89E-5
NHWD	kg	6.90E-2	9.88E-3	1.06E-6	7.89E-2	4.51E-3	3.54E-2	1.80E-2	-2.70E-2	1.10E-1
RWD	kg	2.86E-5	1.08E-6	1.10E-13	2.97E-5	4.95E-7	3.46E-6	2.67E-8	-1.52E-5	1.85E-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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