Environmental Profile

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

Ecochain v3.5.80

Product:	3043693 - Angle ext. KANION PVC 130x to order BK
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	1.67E+0	1.62E-2	6.12E-4	1.68E+0	9.03E-3	1.20E+0	2.97E-3	-1.48E-1	2.74E+0
GWP-f	kg CO2 eq	1.91E+0	1.62E-2	6.18E-4	1.92E+0	9.02E-3	5.40E-1	2.97E-3	-1.03E+0	1.45E+0
GWP-b	kg CO2 eq	-2.46E-1	9.83E-6	-6.53E-6	-2.46E-1	5.48E-6	6.56E-1	3.64E-6	8.89E-1	1.30E+0
GWP-luluc	kg CO2 eq	5.96E-3	5.73E-6	6.32E-7	5.97E-3	3.19E-6	1.35E-4	8.00E-8	-6.59E-3	-4.81E-4
ODP	kg CFC11 eq	5.07E-7	3.73E-9	3.50E-11	5.10E-7	2.08E-9	4.28E-8	1.08E-10	-2.74E-7	2.81E-7
AP	mol H+ eq	9.59E-3	9.22E-5	6.24E-6	9.69E-3	5.14E-5	9.76E-4	2.65E-6	-5.97E-3	4.75E-3
EP-fw	kg P eq	9.95E-5	1.33E-7	3.48E-8	9.97E-5	7.42E-8	4.65E-6	3.57E-9	-9.31E-5	1.12E-5
EP-m	kg N eq	2.44E-3	3.30E-5	6.56E-7	2.48E-3	1.84E-5	3.00E-4	1.68E-6	-1.31E-3	1.48E-3
EP-T	mol N eq	2.47E-2	3.63E-4	7.84E-6	2.51E-2	2.03E-4	3.28E-3	1.05E-5	-1.50E-2	1.36E-2
POCP	kg NMVOC eq	6.77E-3	1.04E-4	2.65E-6	6.87E-3	5.79E-5	9.81E-4	3.64E-6	-4.07E-3	3.84E-3
ADP-mm	kg Sb eq	1.01E-3	4.19E-7	8.32E-8	1.01E-3	2.33E-7	3.91E-6	2.69E-9	-1.47E-5	1.00E-3
ADP-f	MJ	3.84E+1	2.48E-1	5.74E-3	3.86E+1	1.38E-1	2.25E+0	7.92E-3	-2.03E+1	2.07E+1
WDP	m3 depriv.	1.61E+0	7.62E-4	2.21E-4	1.61E+0	4.25E-4	6.23E-2	6.48E-5	-1.85E+0	-1.69E-1
PM	disease inc.	1.11E-7	1.46E-9	3.84E-11	1.12E-7	8.14E-10	1.32E-8	5.45E-11	-9.83E-8	2.78E-8
IR	kBq U-235 eq	9.21E-2	1.09E-3	4.31E-6	9.32E-2	6.05E-4	8.65E-3	3.62E-5	-7.52E-2	2.73E-2
ETP-fw	CTUe	1.36E+2	2.02E-1	5.11E-2	1.36E+2	1.12E-1	1.24E+1	1.18E-1	-7.40E+1	7.50E+1
HTP-c	CTUh	1.34E-9	7.18E-12	2.61E-12	1.35E-9	4.00E-12	3.13E-10	2.28E-13	-8.24E-10	8.45E-10
HTP-nc	CTUh	3.68E-8	2.40E-10	6.62E-11	3.71E-8	1.34E-10	5.39E-9	2.30E-11	-2.54E-8	1.72E-8
SQP	Pt	6.22E+1	2.13E-1	9.47E-3	6.24E+1	1.18E-1	1.35E+0	2.02E-2	-1.80E+2	-1.16E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.18E+1	3.56E-3	1.02E-1	1.20E+1	1.99E-3	1.27E-1	2.90E-4	-3.22E+1	-2.01E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.18E+1	3.56E-3	1.02E-1	1.20E+1	1.99E-3	1.27E-1	2.90E-4	-3.22E+1	-2.01E+1
PENRE	MJ	4.12E+1	2.64E-1	6.11E-3	4.15E+1	1.47E-1	2.39E+0	8.41E-3	-2.18E+1	2.23E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.12E+1	2.64E-1	6.11E-3	4.15E+1	1.47E-1	2.39E+0	8.41E-3	-2.18E+1	2.23E+1
PET	MJ	5.31E+1	2.67E-1	1.08E-1	5.35E+1	1.49E-1	2.52E+0	8.70E-3	-5.40E+1	2.17E+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	2.86E-2	2.81E-5	6.17E-6	2.86E-2	1.57E-5	1.90E-3	9.64E-6	-3.96E-2	-9.07E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.59E-4	6.35E-7	1.16E-12	1.60E-4	3.54E-7	4.60E-6	9.76E-9	-2.29E-5	1.42E-4
NHWD	kg	2.76E-1	1.54E-2	4.46E-6	2.91E-1	8.58E-3	9.65E-2	3.47E-2	-1.11E-1	3.20E-1
RWD	kg	9.14E-5	1.69E-6	4.64E-13	9.31E-5	9.42E-7	1.07E-5	5.14E-8	-7.10E-5	3.38E-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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