Environmental Profile

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

Ecochain v3.5.80

Product:	3043663 - Gutter PVC bracket KANION 70 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	1.04E-1	2.07E-3	1.45E-4	1.06E-1	8.96E-4	9.86E-2	2.90E-4	-5.88E-2	1.47E-1
GWP-f	kg CO2 eq	1.37E-1	2.06E-3	1.46E-4	1.39E-1	8.95E-4	5.93E-2	2.90E-4	-7.20E-2	1.27E-1
GWP-b	kg CO2 eq	-3.31E-2	1.25E-6	-1.54E-6	-3.31E-2	5.43E-7	3.93E-2	3.56E-7	1.34E-2	1.95E-2
GWP-luluc	kg CO2 eq	1.90E-4	7.31E-7	1.49E-7	1.91E-4	3.17E-7	1.17E-5	7.86E-9	-1.36E-4	6.75E-5
ODP	kg CFC11 eq	4.14E-8	4.76E-10	8.26E-12	4.19E-8	2.06E-10	3.31E-9	1.06E-11	-2.29E-8	2.25E-8
AP	mol H+ eq	6.59E-4	1.18E-5	1.47E-6	6.72E-4	5.10E-6	6.45E-5	2.60E-7	-2.61E-4	4.81E-4
EP-fw	kg P eq	5.92E-6	1.70E-8	8.24E-9	5.95E-6	7.36E-9	3.94E-7	3.50E-10	-2.89E-6	3.46E-6
EP-m	kg N eq	1.30E-4	4.21E-6	1.55E-7	1.34E-4	1.82E-6	1.76E-5	1.57E-7	-5.40E-5	1.00E-4
EP-T	mol N eq	1.39E-3	4.64E-5	1.85E-6	1.44E-3	2.01E-5	1.94E-4	1.03E-6	-6.00E-4	1.05E-3
POCP	kg NMVOC eq	4.83E-4	1.33E-5	6.28E-7	4.97E-4	5.75E-6	5.74E-5	3.57E-7	-1.97E-4	3.64E-4
ADP-mm	kg Sb eq	9.87E-5	5.34E-8	1.97E-8	9.88E-5	2.32E-8	2.43E-7	2.64E-10	-9.63E-7	9.81E-5
ADP-f	MJ	3.21E+0	3.17E-2	1.36E-3	3.24E+0	1.37E-2	1.61E-1	7.77E-4	-1.50E+0	1.92E+0
WDP	m3 depriv.	1.47E-1	9.72E-5	5.22E-5	1.47E-1	4.22E-5	5.72E-3	6.43E-6	-7.79E-2	7.53E-2
PM	disease inc.	6.01E-9	1.86E-10	9.08E-12	6.21E-9	8.08E-11	8.09E-10	5.35E-12	-2.94E-9	4.16E-9
IR	kBq U-235 eq	6.22E-3	1.38E-4	1.02E-6	6.36E-3	6.00E-5	5.82E-4	3.55E-6	-2.93E-3	4.07E-3
ETP-fw	CTUe	4.58E+0	2.57E-2	1.21E-2	4.61E+0	1.12E-2	1.11E+0	1.18E-2	-1.77E+0	3.98E+0
HTP-c	CTUh	1.26E-10	9.16E-13	6.17E-13	1.27E-10	3.97E-13	2.29E-11	2.24E-14	-4.18E-11	1.09E-10
HTP-nc	CTUh	3.09E-9	3.07E-11	1.57E-11	3.14E-9	1.33E-11	4.39E-10	2.29E-12	-8.41E-10	2.75E-9
SQP	Pt	3.77E+0	2.71E-2	2.24E-3	3.80E+0	1.18E-2	1.01E-1	1.98E-3	-4.89E+0	-9.77E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.58E-1	4.55E-4	2.40E-2	8.83E-1	1.97E-4	1.08E-2	2.83E-5	-8.35E-1	5.90E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.58E-1	4.55E-4	2.40E-2	8.83E-1	1.97E-4	1.08E-2	2.83E-5	-8.35E-1	5.90E-2
PENRE	MJ	3.44E+0	3.36E-2	1.44E-3	3.48E+0	1.46E-2	1.71E-1	8.25E-4	-1.62E+0	2.04E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.44E+0	3.36E-2	1.44E-3	3.48E+0	1.46E-2	1.71E-1	8.25E-4	-1.62E+0	2.04E+0
PET	MJ	4.30E+0	3.41E-2	2.55E-2	4.36E+0	1.48E-2	1.82E-1	8.53E-4	-2.46E+0	2.10E+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	2.18E-3	3.59E-6	1.46E-6	2.19E-3	1.55E-6	1.64E-4	9.46E-7	-1.16E-3	1.19E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.44E-5	8.10E-8	2.73E-13	1.45E-5	3.51E-8	2.86E-7	9.59E-10	-1.69E-6	1.32E-5
NHWD	kg	1.52E-2	1.96E-3	1.05E-6	1.72E-2	8.51E-4	7.50E-3	3.40E-3	-5.59E-3	2.33E-2
RWD	kg	5.82E-6	2.15E-7	1.10E-13	6.03E-6	9.34E-8	6.55E-7	5.04E-9	-2.77E-6	4.02E-6
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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