Environmental Profile

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

Ecochain v3.5.80

Product:	3043726 - Reducer KANION PVC 75/50 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	3.58E-1	8.15E-3	4.98E-4	3.66E-1	2.40E-3	2.67E-1	7.94E-4	-1.19E-1	5.18E-1
GWP-f	kg CO2 eq	4.21E-1	8.15E-3	5.03E-4	4.29E-1	2.40E-3	1.56E-1	7.94E-4	-2.20E-1	3.69E-1
GWP-b	kg CO2 eq	-6.38E-2	4.95E-6	-5.31E-6	-6.38E-2	1.45E-6	1.11E-1	9.44E-7	1.02E-1	1.49E-1
GWP-luluc	kg CO2 eq	8.71E-4	2.88E-6	5.14E-7	8.74E-4	8.48E-7	3.20E-5	2.24E-8	-8.11E-4	9.64E-5
ODP	kg CFC11 eq	1.15E-7	1.88E-9	2.84E-11	1.17E-7	5.52E-10	9.34E-9	2.85E-11	-6.52E-8	6.15E-8
AP	mol H+ eq	2.07E-3	4.64E-5	5.08E-6	2.13E-3	1.36E-5	1.98E-4	7.04E-7	-9.80E-4	1.36E-3
EP-fw	kg P eq	1.98E-5	6.70E-8	2.83E-8	1.99E-5	1.97E-8	1.08E-6	9.81E-10	-1.33E-5	7.71E-6
EP-m	kg N eq	4.60E-4	1.66E-5	5.34E-7	4.77E-4	4.88E-6	5.72E-5	4.13E-7	-2.09E-4	3.31E-4
EP-T	mol N eq	4.77E-3	1.83E-4	6.38E-6	4.96E-3	5.38E-5	6.29E-4	2.78E-6	-2.35E-3	3.29E-3
POCP	kg NMVOC eq	1.49E-3	5.23E-5	2.16E-6	1.55E-3	1.54E-5	1.87E-4	9.64E-7	-6.99E-4	1.05E-3
ADP-mm	kg Sb eq	4.40E-4	2.11E-7	6.77E-8	4.40E-4	6.20E-8	7.67E-7	7.26E-10	-2.96E-6	4.38E-4
ADP-f	MJ	9.23E+0	1.25E-1	4.67E-3	9.36E+0	3.68E-2	4.79E-1	2.09E-3	-4.47E+0	5.41E+0
WDP	m3 depriv.	3.97E-1	3.84E-4	1.80E-4	3.97E-1	1.13E-4	1.51E-2	2.20E-5	-3.01E-1	1.11E-1
PM	disease inc.	2.08E-8	7.35E-10	3.13E-11	2.15E-8	2.16E-10	2.58E-9	1.44E-11	-1.36E-8	1.07E-8
IR	kBq U-235 eq	1.98E-2	5.47E-4	3.50E-6	2.04E-2	1.61E-4	1.77E-3	9.46E-6	-1.17E-2	1.06E-2
ETP-fw	CTUe	2.15E+1	1.02E-1	4.16E-2	2.17E+1	2.99E-2	2.93E+0	2.99E-2	-9.60E+0	1.50E+1
HTP-c	CTUh	3.73E-10	3.61E-12	2.12E-12	3.79E-10	1.06E-12	7.11E-11	6.36E-14	-1.42E-10	3.10E-10
HTP-nc	CTUh	9.61E-9	1.21E-10	5.39E-11	9.78E-9	3.56E-11	1.24E-9	5.86E-12	-3.53E-9	7.53E-9
SQP	Pt	1.08E+1	1.07E-1	7.71E-3	1.09E+1	3.15E-2	2.99E-1	5.32E-3	-2.33E+1	-1.20E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.03E+0	1.79E-3	8.27E-2	2.12E+0	5.28E-4	2.97E-2	7.35E-5	-4.14E+0	-1.99E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.03E+0	1.79E-3	8.27E-2	2.12E+0	5.28E-4	2.97E-2	7.35E-5	-4.14E+0	-1.99E+0
PENRE	MJ	9.90E+0	1.33E-1	4.97E-3	1.00E+1	3.90E-2	5.09E-1	2.22E-3	-4.81E+0	5.77E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.90E+0	1.33E-1	4.97E-3	1.00E+1	3.90E-2	5.09E-1	2.22E-3	-4.81E+0	5.77E+0
PET	MJ	1.19E+1	1.35E-1	8.77E-2	1.22E+1	3.96E-2	5.39E-1	2.29E-3	-8.95E+0	3.78E+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	6.50E-3	1.42E-5	5.02E-6	6.52E-3	4.16E-6	4.44E-4	2.52E-6	-5.54E-3	1.43E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.20E-5	3.20E-7	9.40E-13	6.23E-5	9.40E-8	9.07E-7	2.62E-9	-5.07E-6	5.82E-5
NHWD	kg	5.08E-2	7.75E-3	3.63E-6	5.85E-2	2.28E-3	2.20E-2	9.11E-3	-1.92E-2	7.27E-2
RWD	kg	1.92E-5	8.50E-7	3.77E-13	2.01E-5	2.50E-7	2.08E-6	1.35E-8	-1.11E-5	1.14E-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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