Environmental Profile

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

Ecochain v3.5.80

Product:	3024169 - KANION PVC Reducer 110/75 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	5.58E-1	1.19E-2	7.03E-4	5.71E-1	4.53E-3	3.43E-1	1.49E-3	-2.24E-1	6.95E-1
GWP-f	kg CO2 eq	6.19E-1	1.19E-2	7.09E-4	6.32E-1	4.52E-3	2.34E-1	1.49E-3	-3.19E-1	5.53E-1
GWP-b	kg CO2 eq	-6.20E-2	7.22E-6	-7.49E-6	-6.20E-2	2.75E-6	1.09E-1	1.79E-6	9.52E-2	1.42E-1
GWP-luluc	kg CO2 eq	1.01E-3	4.21E-6	7.25E-7	1.01E-3	1.60E-6	5.76E-5	4.16E-8	-8.30E-4	2.39E-4
ODP	kg CFC11 eq	2.03E-7	2.74E-9	4.01E-11	2.06E-7	1.04E-9	1.63E-8	5.38E-11	-1.12E-7	1.12E-7
AP	mol H+ eq	3.02E-3	6.77E-5	7.16E-6	3.09E-3	2.58E-5	3.17E-4	1.32E-6	-1.31E-3	2.13E-3
EP-fw	kg P eq	2.81E-5	9.78E-8	4.00E-8	2.82E-5	3.72E-8	1.94E-6	1.83E-9	-1.61E-5	1.40E-5
EP-m	kg N eq	6.18E-4	2.42E-5	7.53E-7	6.42E-4	9.22E-6	8.62E-5	7.84E-7	-2.65E-4	4.74E-4
EP-T	mol N eq	6.49E-3	2.67E-4	9.00E-6	6.77E-3	1.02E-4	9.48E-4	5.25E-6	-2.94E-3	4.88E-3
POCP	kg NMVOC eq	2.09E-3	7.63E-5	3.04E-6	2.17E-3	2.90E-5	2.82E-4	1.82E-6	-9.11E-4	1.58E-3
ADP-mm	kg Sb eq	6.84E-4	3.07E-7	9.54E-8	6.85E-4	1.17E-7	1.23E-6	1.36E-9	-4.79E-6	6.81E-4
ADP-f	MJ	1.41E+1	1.82E-1	6.58E-3	1.43E+1	6.94E-2	8.03E-1	3.94E-3	-6.82E+0	8.37E+0
WDP	m3 depriv.	6.71E-1	5.60E-4	2.53E-4	6.72E-1	2.13E-4	2.80E-2	3.90E-5	-4.25E-1	2.75E-1
PM	disease inc.	2.73E-8	1.07E-9	4.41E-11	2.85E-8	4.08E-10	4.05E-9	2.72E-11	-1.53E-8	1.77E-8
IR	kBq U-235 eq	3.04E-2	7.97E-4	4.94E-6	3.12E-2	3.04E-4	2.90E-3	1.79E-5	-1.57E-2	1.87E-2
ETP-fw	CTUe	2.60E+1	1.48E-1	5.86E-2	2.62E+1	5.64E-2	5.41E+0	5.74E-2	-1.04E+1	2.13E+1
HTP-c	CTUh	5.24E-10	5.27E-12	2.99E-12	5.33E-10	2.01E-12	1.12E-10	1.18E-13	-1.87E-10	4.60E-10
HTP-nc	CTUh	1.45E-8	1.77E-10	7.59E-11	1.48E-8	6.72E-11	2.13E-9	1.12E-11	-5.14E-9	1.19E-8
SQP	Pt	1.13E+1	1.56E-1	1.09E-2	1.14E+1	5.94E-2	5.00E-1	1.00E-2	-2.25E+1	-1.05E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.21E+0	2.62E-3	1.17E-1	2.33E+0	9.96E-4	5.32E-2	1.40E-4	-4.05E+0	-1.66E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.21E+0	2.62E-3	1.17E-1	2.33E+0	9.96E-4	5.32E-2	1.40E-4	-4.05E+0	-1.66E+0
PENRE	MJ	1.52E+1	1.94E-1	7.01E-3	1.54E+1	7.37E-2	8.54E-1	4.19E-3	-7.36E+0	8.93E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.52E+1	1.94E-1	7.01E-3	1.54E+1	7.37E-2	8.54E-1	4.19E-3	-7.36E+0	8.93E+0
PET	MJ	1.74E+1	1.96E-1	1.24E-1	1.77E+1	7.47E-2	9.07E-1	4.33E-3	-1.14E+1	7.27E+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	9.80E-3	2.06E-5	7.08E-6	9.83E-3	7.86E-6	7.97E-4	4.77E-6	-6.71E-3	3.93E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.58E-5	4.66E-7	1.33E-12	9.63E-5	1.78E-7	1.43E-6	4.92E-9	-7.03E-6	9.08E-5
NHWD	kg	6.84E-2	1.13E-2	5.12E-6	7.97E-2	4.30E-3	3.47E-2	1.72E-2	-2.58E-2	1.10E-1
RWD	kg	2.91E-5	1.24E-6	5.32E-13	3.03E-5	4.72E-7	3.28E-6	2.55E-8	-1.45E-5	1.96E-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

Ecochain

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777