Environmental Profile

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

Ecochain v3.5.80

Product:	3024108 - KANION PVC Pipe connector 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	2.35E-1	4.38E-3	1.45E-4	2.39E-1	2.24E-3	2.00E-1	7.20E-4	-1.25E-1	3.17E-1
GWP-f	kg CO2 eq	2.99E-1	4.38E-3	1.46E-4	3.04E-1	2.23E-3	1.18E-1	7.20E-4	-1.58E-1	2.67E-1
GWP-b	kg CO2 eq	-6.53E-2	2.66E-6	-1.54E-6	-6.53E-2	1.36E-6	8.15E-2	8.90E-7	3.35E-2	4.96E-2
GWP-luluc	kg CO2 eq	4.34E-4	1.55E-6	1.49E-7	4.36E-4	7.90E-7	2.90E-5	1.94E-8	-3.31E-4	1.35E-4
ODP	kg CFC11 eq	1.02E-7	1.01E-9	8.26E-12	1.03E-7	5.15E-10	8.21E-9	2.65E-11	-5.50E-8	5.70E-8
AP	mol H+ eq	1.45E-3	2.49E-5	1.47E-6	1.48E-3	1.27E-5	1.56E-4	6.48E-7	-6.19E-4	1.03E-3
EP-fw	kg P eq	1.33E-5	3.60E-8	8.24E-9	1.34E-5	1.84E-8	9.78E-7	8.68E-10	-7.07E-6	7.30E-6
EP-m	kg N eq	2.86E-4	8.93E-6	1.55E-7	2.95E-4	4.55E-6	4.17E-5	3.94E-7	-1.26E-4	2.16E-4
EP-T	mol N eq	3.04E-3	9.84E-5	1.85E-6	3.14E-3	5.02E-5	4.60E-4	2.58E-6	-1.40E-3	2.26E-3
POCP	kg NMVOC eq	1.03E-3	2.81E-5	6.28E-7	1.06E-3	1.43E-5	1.36E-4	8.89E-7	-4.53E-4	7.56E-4
ADP-mm	kg Sb eq	1.99E-4	1.13E-7	1.97E-8	1.99E-4	5.78E-8	5.98E-7	6.57E-10	-2.35E-6	1.97E-4
ADP-f	MJ	6.96E+0	6.72E-2	1.36E-3	7.03E+0	3.43E-2	3.95E-1	1.94E-3	-3.38E+0	4.08E+0
WDP	m3 depriv.	3.42E-1	2.06E-4	5.22E-5	3.43E-1	1.05E-4	1.42E-2	1.54E-5	-1.92E-1	1.65E-1
PM	disease inc.	1.31E-8	3.95E-10	9.08E-12	1.35E-8	2.02E-10	1.96E-9	1.34E-11	-6.97E-9	8.73E-9
IR	kBq U-235 eq	1.42E-2	2.94E-4	1.02E-6	1.45E-2	1.50E-4	1.43E-3	8.86E-6	-7.12E-3	8.94E-3
ETP-fw	CTUe	1.05E+1	5.46E-2	1.21E-2	1.05E+1	2.78E-2	2.78E+0	2.98E-2	-4.31E+0	9.07E+0
HTP-c	CTUh	2.81E-10	1.94E-12	6.17E-13	2.84E-10	9.91E-13	5.27E-11	5.55E-14	-9.70E-11	2.40E-10
HTP-nc	CTUh	7.04E-9	6.51E-11	1.57E-11	7.12E-9	3.32E-11	1.06E-9	5.75E-12	-2.10E-9	6.12E-9
SQP	Pt	7.88E+0	5.75E-2	2.24E-3	7.94E+0	2.93E-2	2.47E-1	4.95E-3	-1.11E+1	-2.83E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.92E+0	9.65E-4	2.40E-2	1.95E+0	4.92E-4	2.68E-2	7.08E-5	-1.91E+0	6.23E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.92E+0	9.65E-4	2.40E-2	1.95E+0	4.92E-4	2.68E-2	7.08E-5	-1.91E+0	6.23E-2
PENRE	MJ	7.46E+0	7.14E-2	1.44E-3	7.54E+0	3.64E-2	4.21E-1	2.06E-3	-3.65E+0	4.35E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.46E+0	7.14E-2	1.44E-3	7.54E+0	3.64E-2	4.21E-1	2.06E-3	-3.65E+0	4.35E+0
PET	MJ	9.38E+0	7.23E-2	2.55E-2	9.48E+0	3.69E-2	4.47E-1	2.13E-3	-5.56E+0	4.41E+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	4.80E-3	7.61E-6	1.46E-6	4.81E-3	3.88E-6	4.04E-4	2.36E-6	-2.85E-3	2.37E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.97E-5	1.72E-7	2.73E-13	2.99E-5	8.77E-8	6.94E-7	2.39E-9	-3.71E-6	2.69E-5
NHWD	kg	3.41E-2	4.17E-3	1.05E-6	3.83E-2	2.12E-3	1.71E-2	8.49E-3	-1.31E-2	5.28E-2
RWD	kg	1.32E-5	4.57E-7	1.10E-13	1.37E-5	2.33E-7	1.60E-6	1.26E-8	-6.65E-6	8.90E-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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