Environmental Profile

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

Ecochain v3.5.80

Product:	3021640 - KANION PVC Pipe connector 75 BN 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	2.27E-1	4.13E-3	1.45E-4	2.31E-1	2.53E-3	1.90E-1	8.18E-4	-1.26E-1	2.98E-1
GWP-f	kg CO2 eq	2.91E-1	4.12E-3	1.46E-4	2.96E-1	2.52E-3	1.08E-1	8.18E-4	-1.59E-1	2.48E-1
GWP-b	kg CO2 eq	-6.48E-2	2.50E-6	-1.54E-6	-6.48E-2	1.53E-6	8.15E-2	1.00E-6	3.34E-2	5.00E-2
GWP-luluc	kg CO2 eq	4.22E-4	1.46E-6	1.49E-7	4.23E-4	8.93E-7	3.22E-5	2.23E-8	-3.38E-4	1.19E-4
ODP	kg CFC11 eq	1.11E-7	9.50E-10	8.26E-12	1.12E-7	5.81E-10	9.05E-9	2.99E-11	-6.01E-8	6.20E-8
AP	mol H+ eq	1.40E-3	2.35E-5	1.47E-6	1.42E-3	1.44E-5	1.68E-4	7.34E-7	-6.56E-4	9.51E-4
EP-fw	kg P eq	1.30E-5	3.39E-8	8.24E-9	1.31E-5	2.08E-8	1.08E-6	9.91E-10	-7.50E-6	6.67E-6
EP-m	kg N eq	2.73E-4	8.40E-6	1.55E-7	2.81E-4	5.14E-6	4.43E-5	4.43E-7	-1.31E-4	2.00E-4
EP-T	mol N eq	2.92E-3	9.26E-5	1.85E-6	3.01E-3	5.67E-5	4.88E-4	2.92E-6	-1.45E-3	2.11E-3
POCP	kg NMVOC eq	9.67E-4	2.65E-5	6.28E-7	9.94E-4	1.62E-5	1.45E-4	1.01E-6	-4.72E-4	6.84E-4
ADP-mm	kg Sb eq	7.97E-5	1.07E-7	1.97E-8	7.98E-5	6.53E-8	6.55E-7	7.46E-10	-2.60E-6	7.79E-5
ADP-f	MJ	6.80E+0	6.33E-2	1.36E-3	6.86E+0	3.87E-2	4.35E-1	2.19E-3	-3.48E+0	3.86E+0
WDP	m3 depriv.	3.62E-1	1.94E-4	5.22E-5	3.62E-1	1.19E-4	1.58E-2	1.85E-5	-2.09E-1	1.69E-1
PM	disease inc.	1.24E-8	3.72E-10	9.08E-12	1.28E-8	2.28E-10	2.12E-9	1.51E-11	-7.22E-9	7.93E-9
IR	kBq U-235 eq	1.38E-2	2.77E-4	1.02E-6	1.40E-2	1.69E-4	1.56E-3	1.00E-5	-7.62E-3	8.15E-3
ETP-fw	CTUe	9.53E+0	5.14E-2	1.21E-2	9.60E+0	3.14E-2	3.08E+0	3.32E-2	-4.46E+0	8.28E+0
HTP-c	CTUh	2.70E-10	1.83E-12	6.17E-13	2.72E-10	1.12E-12	5.61E-11	6.35E-14	-1.03E-10	2.27E-10
HTP-nc	CTUh	6.64E-9	6.12E-11	1.57E-11	6.72E-9	3.75E-11	1.16E-9	6.43E-12	-2.31E-9	5.60E-9
SQP	Pt	7.83E+0	5.41E-2	2.24E-3	7.88E+0	3.31E-2	2.71E-1	5.60E-3	-1.11E+1	-2.89E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.92E+0	9.08E-4	2.40E-2	1.95E+0	5.56E-4	2.98E-2	7.95E-5	-1.92E+0	5.60E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.92E+0	9.08E-4	2.40E-2	1.95E+0	5.56E-4	2.98E-2	7.95E-5	-1.92E+0	5.60E-2
PENRE	MJ	7.29E+0	6.72E-2	1.44E-3	7.36E+0	4.11E-2	4.62E-1	2.33E-3	-3.75E+0	4.11E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.29E+0	6.72E-2	1.44E-3	7.36E+0	4.11E-2	4.62E-1	2.33E-3	-3.75E+0	4.11E+0
PET	MJ	9.21E+0	6.81E-2	2.55E-2	9.31E+0	4.17E-2	4.92E-1	2.41E-3	-5.67E+0	4.17E+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	4.78E-3	7.16E-6	1.46E-6	4.79E-3	4.38E-6	4.45E-4	2.67E-6	-3.02E-3	2.22E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.48E-5	1.62E-7	2.73E-13	1.50E-5	9.90E-8	7.53E-7	2.71E-9	-3.73E-6	1.21E-5
NHWD	kg	3.44E-2	3.92E-3	1.05E-6	3.83E-2	2.40E-3	1.78E-2	9.60E-3	-1.40E-2	5.41E-2
RWD	kg	1.25E-5	4.30E-7	1.10E-13	1.29E-5	2.63E-7	1.74E-6	1.42E-8	-7.07E-6	7.89E-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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