

Environmental Profile

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

Ecochain v3.5.80



Product: 3021653 - KANION PVC Pipe connector 110 BN S/S
 Unit: 1 piece
 Manufacturer: Wavin - PL -Buk - Extra products

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



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.

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	☑	☑	☑	☑									

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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.98E-1	7.70E-3	1.45E-4	4.06E-1	4.84E-3	3.45E-1	1.56E-3	-2.29E-1	5.29E-1
GWP-f	kg CO2 eq	5.27E-1	7.70E-3	1.46E-4	5.34E-1	4.84E-3	1.85E-1	1.56E-3	-2.89E-1	4.36E-1
GWP-b	kg CO2 eq	-1.29E-1	4.67E-6	-1.54E-6	-1.29E-1	2.94E-6	1.60E-1	1.93E-6	6.11E-2	9.22E-2
GWP-luluc	kg CO2 eq	7.70E-4	2.72E-6	1.49E-7	7.73E-4	1.71E-6	6.19E-5	4.21E-8	-6.30E-4	2.07E-4
ODP	kg CFC11 eq	2.14E-7	1.77E-9	8.26E-12	2.16E-7	1.12E-9	1.74E-8	5.74E-11	-1.14E-7	1.21E-7
AP	mol H+ eq	2.53E-3	4.39E-5	1.47E-6	2.57E-3	2.76E-5	3.19E-4	1.40E-6	-1.23E-3	1.69E-3
EP-fw	kg P eq	2.38E-5	6.33E-8	8.24E-9	2.38E-5	3.98E-8	2.08E-6	1.88E-9	-1.41E-5	1.19E-5
EP-m	kg N eq	4.92E-4	1.57E-5	1.55E-7	5.08E-4	9.86E-6	8.30E-5	8.53E-7	-2.45E-4	3.57E-4
EP-T	mol N eq	5.26E-3	1.73E-4	1.85E-6	5.43E-3	1.09E-4	9.14E-4	5.58E-6	-2.71E-3	3.75E-3
POCP	kg NMVOC eq	1.72E-3	4.94E-5	6.28E-7	1.77E-3	3.11E-5	2.72E-4	1.93E-6	-8.79E-4	1.20E-3
ADP-mm	kg Sb eq	1.34E-4	1.99E-7	1.97E-8	1.34E-4	1.25E-7	1.25E-6	1.42E-9	-4.97E-6	1.31E-4
ADP-f	MJ	1.23E+1	1.18E-1	1.36E-3	1.24E+1	7.43E-2	8.29E-1	4.20E-3	-6.40E+0	6.92E+0
WDP	m3 depriv.	6.76E-1	3.63E-4	5.22E-5	6.77E-1	2.28E-4	3.05E-2	3.34E-5	-3.96E-1	3.12E-1
PM	disease inc.	2.23E-8	6.95E-10	9.08E-12	2.30E-8	4.37E-10	4.01E-9	2.89E-11	-1.35E-8	1.39E-8
IR	kBq U-235 eq	2.55E-2	5.16E-4	1.02E-6	2.61E-2	3.25E-4	2.98E-3	1.92E-5	-1.44E-2	1.50E-2
ETP-fw	CTUe	1.73E+1	9.60E-2	1.21E-2	1.74E+1	6.03E-2	5.96E+0	6.45E-2	-8.29E+0	1.52E+1
HTP-c	CTUh	4.81E-10	3.41E-12	6.17E-13	4.85E-10	2.15E-12	1.03E-10	1.20E-13	-1.96E-10	3.95E-10
HTP-nc	CTUh	1.21E-8	1.14E-10	1.57E-11	1.22E-8	7.19E-11	2.20E-9	1.25E-11	-4.65E-9	9.88E-9
SQP	Pt	1.52E+1	1.01E-1	2.24E-3	1.53E+1	6.36E-2	5.13E-1	1.07E-2	-2.11E+1	-5.18E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.76E+0	1.70E-3	2.40E-2	3.78E+0	1.07E-3	5.72E-2	1.53E-4	-3.65E+0	1.94E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.76E+0	1.70E-3	2.40E-2	3.78E+0	1.07E-3	5.72E-2	1.53E-4	-3.65E+0	1.94E-1
PENRE	MJ	1.32E+1	1.25E-1	1.44E-3	1.33E+1	7.89E-2	8.82E-1	4.46E-3	-6.90E+0	7.39E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.32E+1	1.25E-1	1.44E-3	1.33E+1	7.89E-2	8.82E-1	4.46E-3	-6.90E+0	7.39E+0
PET	MJ	1.70E+1	1.27E-1	2.55E-2	1.71E+1	7.99E-2	9.39E-1	4.61E-3	-1.05E+1	7.59E+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	8.64E-3	1.34E-5	1.46E-6	8.66E-3	8.41E-6	8.54E-4	5.12E-6	-5.66E-3	3.87E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.58E-5	3.02E-7	2.73E-13	2.61E-5	1.90E-7	1.43E-6	5.17E-9	-6.72E-6	2.10E-5
NHWD	kg	6.22E-2	7.32E-3	1.05E-6	6.95E-2	4.60E-3	3.28E-2	1.84E-2	-2.66E-2	9.87E-2
RWD	kg	2.33E-5	8.04E-7	1.10E-13	2.41E-5	5.05E-7	3.30E-6	2.72E-8	-1.33E-5	1.46E-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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