

Environmental Profile

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

Ecochain v3.5.80



Product: 3021647 - KANION PVC Pipe connector 90 Graph. 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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.46E-1	5.06E-3	1.45E-4	3.52E-1	4.03E-3	2.25E-1	1.30E-3	-1.94E-1	3.88E-1
GWP-f	kg CO2 eq	4.10E-1	5.06E-3	1.46E-4	4.15E-1	4.02E-3	1.48E-1	1.30E-3	-2.16E-1	3.53E-1
GWP-b	kg CO2 eq	-6.35E-2	3.07E-6	-1.54E-6	-6.35E-2	2.44E-6	7.66E-2	1.60E-6	2.19E-2	3.51E-2
GWP-luluc	kg CO2 eq	4.83E-4	1.79E-6	1.49E-7	4.84E-4	1.42E-6	5.05E-5	3.52E-8	-3.03E-4	2.34E-4
ODP	kg CFC11 eq	1.72E-7	1.17E-9	8.26E-12	1.73E-7	9.27E-10	1.40E-8	4.77E-11	-9.15E-8	9.63E-8
AP	mol H+ eq	2.01E-3	2.88E-5	1.47E-6	2.04E-3	2.29E-5	2.48E-4	1.17E-6	-8.46E-4	1.46E-3
EP-fw	kg P eq	1.86E-5	4.16E-8	8.24E-9	1.87E-5	3.31E-8	1.69E-6	1.57E-9	-8.91E-6	1.15E-5
EP-m	kg N eq	3.68E-4	1.03E-5	1.55E-7	3.78E-4	8.20E-6	6.28E-5	7.08E-7	-1.61E-4	2.89E-4
EP-T	mol N eq	3.98E-3	1.14E-4	1.85E-6	4.09E-3	9.04E-5	6.92E-4	4.64E-6	-1.75E-3	3.12E-3
POCP	kg NMVOC eq	1.32E-3	3.25E-5	6.28E-7	1.35E-3	2.58E-5	2.06E-4	1.60E-6	-5.91E-4	9.96E-4
ADP-mm	kg Sb eq	3.48E-4	1.31E-7	1.97E-8	3.48E-4	1.04E-7	9.69E-7	1.19E-9	-3.84E-6	3.45E-4
ADP-f	MJ	9.52E+0	7.76E-2	1.36E-3	9.60E+0	6.18E-2	6.58E-1	3.49E-3	-4.91E+0	5.41E+0
WDP	m3 depriv.	5.51E-1	2.38E-4	5.22E-5	5.51E-1	1.90E-4	2.51E-2	2.83E-5	-2.86E-1	2.91E-1
PM	disease inc.	1.57E-8	4.56E-10	9.08E-12	1.61E-8	3.63E-10	3.09E-9	2.41E-11	-7.72E-9	1.19E-8
IR	kBq U-235 eq	2.02E-2	3.39E-4	1.02E-6	2.06E-2	2.70E-4	2.34E-3	1.60E-5	-9.92E-3	1.33E-2
ETP-fw	CTUe	1.26E+1	6.30E-2	1.21E-2	1.27E+1	5.02E-2	4.89E+0	5.35E-2	-4.52E+0	1.32E+1
HTP-c	CTUh	3.96E-10	2.24E-12	6.17E-13	3.99E-10	1.78E-12	8.11E-11	1.00E-13	-1.30E-10	3.52E-10
HTP-nc	CTUh	1.08E-8	7.51E-11	1.57E-11	1.09E-8	5.98E-11	1.77E-9	1.03E-11	-3.28E-9	9.45E-9
SQP	Pt	7.85E+0	6.64E-2	2.24E-3	7.91E+0	5.28E-2	4.08E-1	8.92E-3	-9.27E+0	-8.87E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.28E+0	1.11E-3	2.40E-2	2.31E+0	8.86E-4	4.65E-2	1.27E-4	-1.63E+0	7.24E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.28E+0	1.11E-3	2.40E-2	2.31E+0	8.86E-4	4.65E-2	1.27E-4	-1.63E+0	7.24E-1
PENRE	MJ	1.02E+1	8.24E-2	1.44E-3	1.03E+1	6.56E-2	7.00E-1	3.71E-3	-5.29E+0	5.77E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.02E+1	8.24E-2	1.44E-3	1.03E+1	6.56E-2	7.00E-1	3.71E-3	-5.29E+0	5.77E+0
PET	MJ	1.25E+1	8.35E-2	2.55E-2	1.26E+1	6.65E-2	7.46E-1	3.83E-3	-6.92E+0	6.50E+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	6.93E-3	8.78E-6	1.46E-6	6.94E-3	6.99E-6	6.96E-4	4.25E-6	-3.57E-3	4.08E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.05E-5	1.98E-7	2.73E-13	5.07E-5	1.58E-7	1.10E-6	4.30E-9	-4.86E-6	4.71E-5
NHWD	kg	4.53E-2	4.81E-3	1.05E-6	5.01E-2	3.83E-3	2.57E-2	1.53E-2	-1.81E-2	7.69E-2
RWD	kg	1.79E-5	5.28E-7	1.10E-13	1.85E-5	4.20E-7	2.55E-6	2.26E-8	-9.05E-6	1.24E-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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