

Environmental Profile

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

Ecochain v3.5.80



Product: 3020681 - Wafix PP End Cap 32 WT
 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



Wafix PP is a versatile, uncomplicated solution for your indoor drainage. You can easily install the impact-resistant pipes even in frost. Their excellent chemical resistance makes them ideal for cast-in applications.

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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.39E-3	8.42E-5	1.45E-4	4.62E-3	3.69E-4	6.98E-2	1.73E-4	-2.75E-2	4.75E-2
GWP-f	kg CO2 eq	5.31E-2	8.41E-5	1.46E-4	5.33E-2	3.68E-4	1.95E-2	1.73E-4	-3.08E-2	4.26E-2
GWP-b	kg CO2 eq	-4.88E-2	5.11E-8	-1.54E-6	-4.88E-2	2.24E-7	5.03E-2	1.49E-7	3.35E-3	4.92E-3
GWP-luluc	kg CO2 eq	6.33E-5	2.98E-8	1.49E-7	6.34E-5	1.30E-7	2.37E-6	3.19E-9	-5.06E-5	1.53E-5
ODP	kg CFC11 eq	2.73E-9	1.94E-11	8.26E-12	2.76E-9	8.49E-11	3.98E-10	4.37E-12	-2.70E-9	5.44E-10
AP	mol H+ eq	2.37E-4	4.79E-7	1.47E-6	2.39E-4	2.10E-6	1.66E-5	1.05E-7	-1.14E-4	1.43E-4
EP-fw	kg P eq	1.47E-6	6.92E-10	8.24E-9	1.48E-6	3.03E-9	7.07E-8	1.43E-10	-8.46E-7	7.03E-7
EP-m	kg N eq	4.74E-5	1.71E-7	1.55E-7	4.77E-5	7.51E-7	5.31E-6	6.61E-8	-2.57E-5	2.81E-5
EP-T	mol N eq	5.26E-4	1.89E-6	1.85E-6	5.30E-4	8.28E-6	5.86E-5	4.25E-7	-2.95E-4	3.03E-4
POCP	kg NMVOC eq	2.08E-4	5.40E-7	6.28E-7	2.09E-4	2.37E-6	1.78E-5	1.59E-7	-1.11E-4	1.18E-4
ADP-mm	kg Sb eq	1.02E-6	2.18E-9	1.97E-8	1.04E-6	9.53E-9	6.12E-8	1.08E-10	-2.66E-7	8.43E-7
ADP-f	MJ	1.46E+0	1.29E-3	1.36E-3	1.46E+0	5.66E-3	4.51E-2	3.20E-4	-7.63E-1	7.46E-1
WDP	m3 depriv.	3.12E-2	3.96E-6	5.22E-5	3.13E-2	1.74E-5	7.79E-4	2.42E-6	-1.75E-2	1.46E-2
PM	disease inc.	2.77E-9	7.59E-12	9.08E-12	2.79E-9	3.33E-11	2.55E-10	2.20E-12	-1.64E-9	1.44E-9
IR	kBq U-235 eq	1.41E-3	5.64E-6	1.02E-6	1.41E-3	2.47E-5	1.49E-4	1.47E-6	-8.30E-4	7.60E-4
ETP-fw	CTUe	1.08E+0	1.05E-3	1.21E-2	1.09E+0	4.59E-3	5.44E-2	2.68E-4	-5.49E-1	6.05E-1
HTP-c	CTUh	4.82E-11	3.73E-14	6.17E-13	4.88E-11	1.63E-13	7.66E-12	8.42E-15	-2.32E-11	3.35E-11
HTP-nc	CTUh	7.41E-10	1.25E-12	1.57E-11	7.58E-10	5.48E-12	8.29E-11	1.76E-13	-2.17E-10	6.29E-10
SQP	Pt	4.32E+0	1.10E-3	2.24E-3	4.33E+0	4.84E-3	3.55E-2	8.17E-4	-4.06E+0	3.09E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.29E-1	1.85E-5	2.40E-2	8.54E-1	8.12E-5	2.08E-3	1.19E-5	-6.32E-1	2.24E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.29E-1	1.85E-5	2.40E-2	8.54E-1	8.12E-5	2.08E-3	1.19E-5	-6.32E-1	2.24E-1
PENRE	MJ	1.56E+0	1.37E-3	1.44E-3	1.56E+0	6.01E-3	4.80E-2	3.39E-4	-8.23E-1	7.95E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.56E+0	1.37E-3	1.44E-3	1.56E+0	6.01E-3	4.80E-2	3.39E-4	-8.23E-1	7.95E-1
PET	MJ	2.39E+0	1.39E-3	2.55E-2	2.42E+0	6.09E-3	5.01E-2	3.51E-4	-1.45E+0	1.02E+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	6.13E-4	1.46E-7	1.46E-6	6.14E-4	6.40E-7	2.57E-5	3.91E-7	-3.39E-4	3.02E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.88E-7	3.30E-9	2.73E-13	6.92E-7	1.45E-8	8.27E-8	3.93E-10	-6.07E-7	1.82E-7
NHWD	kg	5.49E-3	8.00E-5	1.05E-6	5.57E-3	3.51E-4	2.58E-3	1.40E-3	-2.73E-3	7.18E-3
RWD	kg	1.39E-6	8.78E-9	1.10E-13	1.40E-6	3.85E-8	1.95E-7	2.08E-9	-8.61E-7	7.75E-7
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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