

Environmental Profile

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

Ecochain v3.5.80



Product: 3020635 - Wafix PP Branch 88° WT 32x32x32 S/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



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	1.32E-1	1.01E-3	1.45E-4	1.33E-1	1.22E-3	9.89E-2	5.73E-4	-6.71E-2	1.67E-1
GWP-f	kg CO2 eq	1.81E-1	1.01E-3	1.46E-4	1.82E-1	1.22E-3	4.58E-2	5.73E-4	-7.40E-2	1.56E-1
GWP-b	kg CO2 eq	-4.92E-2	6.12E-7	-1.54E-6	-4.92E-2	7.38E-7	5.31E-2	4.98E-7	6.94E-3	1.08E-2
GWP-luluc	kg CO2 eq	1.64E-4	3.57E-7	1.49E-7	1.64E-4	4.30E-7	7.31E-6	9.89E-9	-8.98E-5	8.23E-5
ODP	kg CFC11 eq	1.24E-8	2.32E-10	8.26E-12	1.26E-8	2.80E-10	1.10E-9	1.44E-11	-4.60E-9	9.41E-9
AP	mol H+ eq	8.35E-4	5.74E-6	1.47E-6	8.42E-4	6.93E-6	4.57E-5	3.44E-7	-2.50E-4	6.46E-4
EP-fw	kg P eq	4.67E-6	8.30E-9	8.24E-9	4.68E-6	1.00E-8	2.15E-7	4.51E-10	-1.70E-6	3.21E-6
EP-m	kg N eq	1.46E-4	2.06E-6	1.55E-7	1.48E-4	2.48E-6	1.40E-5	2.22E-7	-5.10E-5	1.14E-4
EP-T	mol N eq	1.66E-3	2.26E-5	1.85E-6	1.69E-3	2.73E-5	1.54E-4	1.39E-6	-5.78E-4	1.29E-3
POCP	kg NMVOC eq	6.47E-4	6.47E-6	6.28E-7	6.54E-4	7.81E-6	4.78E-5	5.23E-7	-2.30E-4	4.81E-4
ADP-mm	kg Sb eq	1.21E-5	2.61E-8	1.97E-8	1.22E-5	3.15E-8	1.77E-7	3.48E-10	-5.59E-7	1.18E-5
ADP-f	MJ	5.24E+0	1.55E-2	1.36E-3	5.25E+0	1.87E-2	1.33E-1	1.05E-3	-2.06E+0	3.34E+0
WDP	m3 depriv.	1.17E-1	4.75E-5	5.22E-5	1.17E-1	5.73E-5	2.45E-3	5.77E-6	-4.56E-2	7.38E-2
PM	disease inc.	8.47E-9	9.10E-11	9.08E-12	8.57E-9	1.10E-10	7.29E-10	7.22E-12	-3.04E-9	6.37E-9
IR	kBq U-235 eq	5.80E-3	6.76E-5	1.02E-6	5.87E-3	8.16E-5	4.22E-4	4.86E-6	-1.69E-3	4.69E-3
ETP-fw	CTUe	3.40E+0	1.26E-2	1.21E-2	3.43E+0	1.52E-2	1.59E-1	8.79E-4	-1.07E+0	2.53E+0
HTP-c	CTUh	1.20E-10	4.47E-13	6.17E-13	1.21E-10	5.39E-13	1.96E-11	2.60E-14	-3.26E-11	1.08E-10
HTP-nc	CTUh	2.48E-9	1.50E-11	1.57E-11	2.51E-9	1.81E-11	2.32E-10	5.68E-13	-3.97E-10	2.36E-9
SQP	Pt	4.96E+0	1.32E-2	2.24E-3	4.98E+0	1.60E-2	1.05E-1	2.69E-3	-4.93E+0	1.70E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.61E+0	2.22E-4	2.40E-2	1.63E+0	2.68E-4	6.35E-3	4.04E-5	-7.99E-1	8.42E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.61E+0	2.22E-4	2.40E-2	1.63E+0	2.68E-4	6.35E-3	4.04E-5	-7.99E-1	8.42E-1
PENRE	MJ	5.61E+0	1.64E-2	1.44E-3	5.63E+0	1.98E-2	1.42E-1	1.11E-3	-2.22E+0	3.57E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.61E+0	1.64E-2	1.44E-3	5.63E+0	1.98E-2	1.42E-1	1.11E-3	-2.22E+0	3.57E+0
PET	MJ	7.22E+0	1.67E-2	2.55E-2	7.27E+0	2.01E-2	1.48E-1	1.16E-3	-3.02E+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	2.26E-3	1.75E-6	1.46E-6	2.26E-3	2.11E-6	7.57E-5	1.29E-6	-8.35E-4	1.50E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.97E-6	3.96E-8	2.73E-13	2.01E-6	4.77E-8	2.32E-7	1.27E-9	-1.03E-6	1.26E-6
NHWD	kg	1.65E-2	9.59E-4	1.05E-6	1.74E-2	1.16E-3	6.93E-3	4.63E-3	-4.18E-3	2.60E-2
RWD	kg	6.23E-6	1.05E-7	1.10E-13	6.34E-6	1.27E-7	5.46E-7	6.85E-9	-1.66E-6	5.36E-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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