

Environmental Profile

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

Ecochain v3.5.80



Product: 3020631 - Wafix PP Branch 45° 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	1.34E-1	1.01E-3	1.45E-4	1.35E-1	1.24E-3	9.97E-2	5.85E-4	-6.84E-2	1.68E-1
GWP-f	kg CO2 eq	1.83E-1	1.01E-3	1.46E-4	1.84E-1	1.24E-3	4.66E-2	5.86E-4	-7.52E-2	1.57E-1
GWP-b	kg CO2 eq	-4.92E-2	6.12E-7	-1.54E-6	-4.92E-2	7.54E-7	5.31E-2	5.09E-7	6.94E-3	1.08E-2
GWP-luluc	kg CO2 eq	1.64E-4	3.57E-7	1.49E-7	1.64E-4	4.40E-7	7.45E-6	1.01E-8	-9.00E-5	8.23E-5
ODP	kg CFC11 eq	1.24E-8	2.32E-10	8.26E-12	1.26E-8	2.86E-10	1.12E-9	1.47E-11	-4.65E-9	9.41E-9
AP	mol H+ eq	8.38E-4	5.74E-6	1.47E-6	8.45E-4	7.08E-6	4.65E-5	3.51E-7	-2.53E-4	6.46E-4
EP-fw	kg P eq	4.67E-6	8.30E-9	8.24E-9	4.69E-6	1.02E-8	2.19E-7	4.61E-10	-1.71E-6	3.21E-6
EP-m	kg N eq	1.47E-4	2.06E-6	1.55E-7	1.49E-4	2.53E-6	1.42E-5	2.27E-7	-5.16E-5	1.14E-4
EP-T	mol N eq	1.67E-3	2.26E-5	1.85E-6	1.69E-3	2.79E-5	1.57E-4	1.42E-6	-5.85E-4	1.30E-3
POCP	kg NMVOC eq	6.52E-4	6.47E-6	6.28E-7	6.59E-4	7.98E-6	4.86E-5	5.34E-7	-2.33E-4	4.83E-4
ADP-mm	kg Sb eq	1.21E-5	2.61E-8	1.97E-8	1.22E-5	3.21E-8	1.80E-7	3.55E-10	-5.67E-7	1.18E-5
ADP-f	MJ	5.30E+0	1.55E-2	1.36E-3	5.32E+0	1.91E-2	1.36E-1	1.07E-3	-2.10E+0	3.37E+0
WDP	m3 depriv.	1.18E-1	4.75E-5	5.22E-5	1.18E-1	5.85E-5	2.50E-3	5.87E-6	-4.63E-2	7.45E-2
PM	disease inc.	8.50E-9	9.10E-11	9.08E-12	8.61E-9	1.12E-10	7.42E-10	7.38E-12	-3.07E-9	6.40E-9
IR	kBq U-235 eq	5.83E-3	6.76E-5	1.02E-6	5.90E-3	8.34E-5	4.30E-4	4.97E-6	-1.71E-3	4.71E-3
ETP-fw	CTUe	3.38E+0	1.26E-2	1.21E-2	3.40E+0	1.55E-2	1.62E-1	8.98E-4	-1.08E+0	2.50E+0
HTP-c	CTUh	1.18E-10	4.47E-13	6.17E-13	1.19E-10	5.51E-13	2.00E-11	2.66E-14	-3.28E-11	1.07E-10
HTP-nc	CTUh	2.44E-9	1.50E-11	1.57E-11	2.47E-9	1.85E-11	2.37E-10	5.80E-13	-4.03E-10	2.33E-9
SQP	Pt	4.96E+0	1.32E-2	2.24E-3	4.97E+0	1.63E-2	1.07E-1	2.75E-3	-4.93E+0	1.68E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.54E+0	2.22E-4	2.40E-2	1.56E+0	2.74E-4	6.48E-3	4.13E-5	-8.00E-1	7.68E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.54E+0	2.22E-4	2.40E-2	1.56E+0	2.74E-4	6.48E-3	4.13E-5	-8.00E-1	7.68E-1
PENRE	MJ	5.69E+0	1.64E-2	1.44E-3	5.70E+0	2.02E-2	1.45E-1	1.14E-3	-2.27E+0	3.60E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.69E+0	1.64E-2	1.44E-3	5.70E+0	2.02E-2	1.45E-1	1.14E-3	-2.27E+0	3.60E+0
PET	MJ	7.22E+0	1.67E-2	2.55E-2	7.27E+0	2.05E-2	1.51E-1	1.18E-3	-3.07E+0	4.37E+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	2.27E-3	1.75E-6	1.46E-6	2.28E-3	2.16E-6	7.72E-5	1.32E-6	-8.45E-4	1.51E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.99E-6	3.96E-8	2.73E-13	2.03E-6	4.88E-8	2.36E-7	1.30E-9	-1.04E-6	1.27E-6
NHWD	kg	1.66E-2	9.59E-4	1.05E-6	1.76E-2	1.18E-3	7.06E-3	4.73E-3	-4.21E-3	2.63E-2
RWD	kg	6.27E-6	1.05E-7	1.10E-13	6.37E-6	1.30E-7	5.55E-7	7.00E-9	-1.67E-6	5.39E-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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