

Environmental Profile

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

Ecochain v3.5.80



Product: 3043807 - Wafix PP Bend 15° WT 32 S/SP
 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	4.48E-2	4.05E-4	1.45E-4	4.54E-2	6.16E-4	7.99E-2	2.90E-4	-3.95E-2	8.67E-2
GWP-f	kg CO2 eq	9.40E-2	4.04E-4	1.46E-4	9.45E-2	6.16E-4	2.82E-2	2.90E-4	-4.43E-2	7.93E-2
GWP-b	kg CO2 eq	-4.92E-2	2.46E-7	-1.54E-6	-4.92E-2	3.74E-7	5.17E-2	2.51E-7	4.80E-3	7.33E-3
GWP-luluc	kg CO2 eq	1.05E-4	1.43E-7	1.49E-7	1.05E-4	2.18E-7	3.84E-6	5.14E-9	-6.72E-5	4.18E-5
ODP	kg CFC11 eq	5.96E-9	9.32E-11	8.26E-12	6.06E-9	1.42E-10	6.18E-10	7.29E-12	-3.37E-9	3.46E-9
AP	mol H+ eq	4.29E-4	2.30E-6	1.47E-6	4.33E-4	3.51E-6	2.56E-5	1.75E-7	-1.57E-4	3.05E-4
EP-fw	kg P eq	2.56E-6	3.33E-9	8.24E-9	2.57E-6	5.07E-9	1.14E-7	2.33E-10	-1.15E-6	1.54E-6
EP-m	kg N eq	8.01E-5	8.24E-7	1.55E-7	8.11E-5	1.26E-6	8.07E-6	1.12E-7	-3.40E-5	5.66E-5
EP-T	mol N eq	9.00E-4	9.08E-6	1.85E-6	9.11E-4	1.38E-5	8.89E-5	7.08E-7	-3.88E-4	6.27E-4
POCP	kg NMVOC eq	3.49E-4	2.60E-6	6.28E-7	3.53E-4	3.95E-6	2.73E-5	2.65E-7	-1.48E-4	2.36E-4
ADP-mm	kg Sb eq	4.63E-6	1.05E-8	1.97E-8	4.66E-6	1.59E-8	9.69E-8	1.78E-10	-3.57E-7	4.42E-6
ADP-f	MJ	2.65E+0	6.21E-3	1.36E-3	2.66E+0	9.46E-3	7.18E-2	5.33E-4	-1.16E+0	1.58E+0
WDP	m3 depriv.	5.89E-2	1.90E-5	5.22E-5	5.89E-2	2.90E-5	1.27E-3	3.40E-6	-2.67E-2	3.35E-2
PM	disease inc.	4.63E-9	3.65E-11	9.08E-12	4.68E-9	5.56E-11	4.01E-10	3.67E-12	-2.12E-9	3.02E-9
IR	kBq U-235 eq	2.87E-3	2.71E-5	1.02E-6	2.90E-3	4.13E-5	2.33E-4	2.46E-6	-1.13E-3	2.05E-3
ETP-fw	CTUe	1.86E+0	5.04E-3	1.21E-2	1.88E+0	7.68E-3	8.67E-2	4.46E-4	-7.53E-1	1.22E+0
HTP-c	CTUh	6.64E-11	1.79E-13	6.17E-13	6.71E-11	2.73E-13	1.14E-11	1.36E-14	-2.64E-11	5.24E-11
HTP-nc	CTUh	1.22E-9	6.01E-12	1.57E-11	1.24E-9	9.15E-12	1.29E-10	2.90E-13	-3.14E-10	1.06E-9
SQP	Pt	4.56E+0	5.31E-3	2.24E-3	4.57E+0	8.09E-3	5.63E-2	1.37E-3	-4.45E+0	1.88E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.88E-1	8.90E-5	2.40E-2	1.01E+0	1.36E-4	3.35E-3	2.02E-5	-7.05E-1	3.10E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.88E-1	8.90E-5	2.40E-2	1.01E+0	1.36E-4	3.35E-3	2.02E-5	-7.05E-1	3.10E-1
PENRE	MJ	2.84E+0	6.59E-3	1.44E-3	2.85E+0	1.00E-2	7.65E-2	5.66E-4	-1.25E+0	1.68E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.84E+0	6.59E-3	1.44E-3	2.85E+0	1.00E-2	7.65E-2	5.66E-4	-1.25E+0	1.68E+0
PET	MJ	3.83E+0	6.68E-3	2.55E-2	3.86E+0	1.02E-2	7.98E-2	5.86E-4	-1.95E+0	1.99E+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	1.16E-3	7.02E-7	1.46E-6	1.16E-3	1.07E-6	4.09E-5	6.54E-7	-5.11E-4	6.93E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.11E-6	1.59E-8	2.73E-13	1.13E-6	2.42E-8	1.29E-7	6.49E-10	-7.34E-7	5.48E-7
NHWD	kg	9.16E-3	3.85E-4	1.05E-6	9.54E-3	5.86E-4	3.93E-3	2.34E-3	-3.23E-3	1.32E-2
RWD	kg	3.02E-6	4.22E-8	1.10E-13	3.06E-6	6.43E-8	3.03E-7	3.47E-9	-1.14E-6	2.28E-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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