

Environmental Profile

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

Ecochain v3.5.80



Product: 3043822 - Wafix PP Bend 15° WT 50 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	7.42E-2	5.94E-4	1.45E-4	7.50E-2	1.09E-3	9.71E-2	5.11E-4	-6.05E-2	1.13E-1
GWP-f	kg CO2 eq	1.23E-1	5.94E-4	1.46E-4	1.24E-1	1.08E-3	4.31E-2	5.11E-4	-6.93E-2	9.94E-2
GWP-b	kg CO2 eq	-4.92E-2	3.61E-7	-1.54E-6	-4.92E-2	6.59E-7	5.40E-2	4.44E-7	8.98E-3	1.38E-2
GWP-luluc	kg CO2 eq	1.38E-4	2.10E-7	1.49E-7	1.38E-4	3.84E-7	6.61E-6	8.85E-9	-1.03E-4	4.23E-5
ODP	kg CFC11 eq	5.98E-9	1.37E-10	8.26E-12	6.13E-9	2.50E-10	1.03E-9	1.28E-11	-4.58E-9	2.84E-9
AP	mol H+ eq	5.23E-4	3.38E-6	1.47E-6	5.28E-4	6.18E-6	4.26E-5	3.07E-7	-2.41E-4	3.36E-4
EP-fw	kg P eq	3.16E-6	4.89E-9	8.24E-9	3.18E-6	8.92E-9	1.96E-7	4.04E-10	-1.80E-6	1.59E-6
EP-m	kg N eq	1.01E-4	1.21E-6	1.55E-7	1.02E-4	2.21E-6	1.32E-5	1.98E-7	-5.01E-5	6.77E-5
EP-T	mol N eq	1.11E-3	1.33E-5	1.85E-6	1.12E-3	2.44E-5	1.45E-4	1.24E-6	-5.69E-4	7.24E-4
POCP	kg NMVOC eq	4.38E-4	3.81E-6	6.28E-7	4.42E-4	6.96E-6	4.50E-5	4.67E-7	-2.20E-4	2.75E-4
ADP-mm	kg Sb eq	3.53E-6	1.54E-8	1.97E-8	3.56E-6	2.81E-8	1.65E-7	3.10E-10	-5.32E-7	3.22E-6
ADP-f	MJ	3.65E+0	9.12E-3	1.36E-3	3.66E+0	1.66E-2	1.22E-1	9.37E-4	-1.90E+0	1.91E+0
WDP	m3 depriv.	7.67E-2	2.80E-5	5.22E-5	7.68E-2	5.11E-5	2.21E-3	5.25E-6	-4.52E-2	3.39E-2
PM	disease inc.	5.57E-9	5.36E-11	9.08E-12	5.63E-9	9.79E-11	6.76E-10	6.44E-12	-3.07E-9	3.34E-9
IR	kBq U-235 eq	3.21E-3	3.98E-5	1.02E-6	3.25E-3	7.28E-5	3.91E-4	4.34E-6	-1.73E-3	1.99E-3
ETP-fw	CTUe	2.49E+0	7.40E-3	1.21E-2	2.51E+0	1.35E-2	1.48E-1	7.84E-4	-1.19E+0	1.48E+0
HTP-c	CTUh	7.86E-11	2.63E-13	6.17E-13	7.95E-11	4.81E-13	1.83E-11	2.33E-14	-3.28E-11	6.56E-11
HTP-nc	CTUh	1.49E-9	8.82E-12	1.57E-11	1.51E-9	1.61E-11	2.14E-10	5.07E-13	-4.59E-10	1.29E-9
SQP	Pt	4.76E+0	7.80E-3	2.24E-3	4.77E+0	1.42E-2	9.57E-2	2.40E-3	-5.29E+0	-4.01E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.17E+0	1.31E-4	2.40E-2	1.19E+0	2.39E-4	5.76E-3	3.60E-5	-8.63E-1	3.35E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.17E+0	1.31E-4	2.40E-2	1.19E+0	2.39E-4	5.76E-3	3.60E-5	-8.63E-1	3.35E-1
PENRE	MJ	3.92E+0	9.68E-3	1.44E-3	3.93E+0	1.77E-2	1.30E-1	9.94E-4	-2.05E+0	2.03E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.92E+0	9.68E-3	1.44E-3	3.93E+0	1.77E-2	1.30E-1	9.94E-4	-2.05E+0	2.03E+0
PET	MJ	5.09E+0	9.81E-3	2.55E-2	5.12E+0	1.79E-2	1.36E-1	1.03E-3	-2.91E+0	2.37E+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	1.42E-3	1.03E-6	1.46E-6	1.42E-3	1.88E-6	6.92E-5	1.15E-6	-8.60E-4	6.35E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.23E-6	2.33E-8	2.73E-13	1.25E-6	4.26E-8	2.16E-7	1.13E-9	-9.92E-7	5.16E-7
NHWD	kg	1.00E-2	5.65E-4	1.05E-6	1.06E-2	1.03E-3	6.41E-3	4.12E-3	-4.17E-3	1.80E-2
RWD	kg	3.19E-6	6.20E-8	1.10E-13	3.26E-6	1.13E-7	5.08E-7	6.11E-9	-1.70E-6	2.18E-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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