

Environmental Profile

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

Ecochain v3.5.80



Product: 3043821 - Wafix PP Bend 15° GY 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	7.18E-2	5.78E-4	1.45E-4	7.25E-2	1.09E-3	9.49E-2	5.11E-4	-5.91E-2	1.10E-1
GWP-f	kg CO2 eq	1.21E-1	5.77E-4	1.46E-4	1.22E-1	1.08E-3	4.09E-2	5.11E-4	-6.80E-2	9.61E-2
GWP-b	kg CO2 eq	-4.91E-2	3.51E-7	-1.54E-6	-4.91E-2	6.59E-7	5.40E-2	4.44E-7	8.98E-3	1.38E-2
GWP-luluc	kg CO2 eq	1.36E-4	2.04E-7	1.49E-7	1.36E-4	3.84E-7	6.60E-6	8.85E-9	-1.03E-4	4.04E-5
ODP	kg CFC11 eq	5.91E-9	1.33E-10	8.26E-12	6.05E-9	2.50E-10	1.03E-9	1.28E-11	-4.44E-9	2.90E-9
AP	mol H+ eq	5.13E-4	3.29E-6	1.47E-6	5.18E-4	6.18E-6	4.23E-5	3.07E-7	-2.40E-4	3.26E-4
EP-fw	kg P eq	3.09E-6	4.75E-9	8.24E-9	3.10E-6	8.92E-9	1.95E-7	4.04E-10	-1.79E-6	1.51E-6
EP-m	kg N eq	9.88E-5	1.18E-6	1.55E-7	1.00E-4	2.21E-6	1.31E-5	1.98E-7	-4.98E-5	6.59E-5
EP-T	mol N eq	1.09E-3	1.30E-5	1.85E-6	1.10E-3	2.44E-5	1.44E-4	1.24E-6	-5.66E-4	7.04E-4
POCP	kg NMVOC eq	4.28E-4	3.71E-6	6.28E-7	4.32E-4	6.96E-6	4.45E-5	4.67E-7	-2.18E-4	2.66E-4
ADP-mm	kg Sb eq	3.53E-6	1.49E-8	1.97E-8	3.57E-6	2.81E-8	1.64E-7	3.10E-10	-5.31E-7	3.23E-6
ADP-f	MJ	3.59E+0	8.86E-3	1.36E-3	3.60E+0	1.66E-2	1.22E-1	9.37E-4	-1.87E+0	1.86E+0
WDP	m3 depriv.	7.49E-2	2.72E-5	5.22E-5	7.50E-2	5.11E-5	2.20E-3	5.25E-6	-4.51E-2	3.21E-2
PM	disease inc.	5.48E-9	5.21E-11	9.08E-12	5.55E-9	9.79E-11	6.73E-10	6.44E-12	-3.07E-9	3.25E-9
IR	kBq U-235 eq	3.14E-3	3.87E-5	1.02E-6	3.18E-3	7.28E-5	3.90E-4	4.34E-6	-1.72E-3	1.92E-3
ETP-fw	CTUe	2.47E+0	7.20E-3	1.21E-2	2.49E+0	1.35E-2	1.47E-1	7.84E-4	-1.19E+0	1.46E+0
HTP-c	CTUh	7.85E-11	2.56E-13	6.17E-13	7.94E-11	4.81E-13	1.80E-11	2.33E-14	-3.27E-11	6.53E-11
HTP-nc	CTUh	1.48E-9	8.58E-12	1.57E-11	1.51E-9	1.61E-11	2.12E-10	5.07E-13	-4.57E-10	1.28E-9
SQP	Pt	4.75E+0	7.58E-3	2.24E-3	4.76E+0	1.42E-2	9.53E-2	2.40E-3	-5.28E+0	-4.09E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.19E+0	1.27E-4	2.40E-2	1.21E+0	2.39E-4	5.74E-3	3.60E-5	-8.62E-1	3.57E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.19E+0	1.27E-4	2.40E-2	1.21E+0	2.39E-4	5.74E-3	3.60E-5	-8.62E-1	3.57E-1
PENRE	MJ	3.85E+0	9.41E-3	1.44E-3	3.86E+0	1.77E-2	1.30E-1	9.94E-4	-2.02E+0	1.99E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.85E+0	9.41E-3	1.44E-3	3.86E+0	1.77E-2	1.30E-1	9.94E-4	-2.02E+0	1.99E+0
PET	MJ	5.04E+0	9.54E-3	2.55E-2	5.07E+0	1.79E-2	1.35E-1	1.03E-3	-2.88E+0	2.34E+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	1.38E-3	1.00E-6	1.46E-6	1.38E-3	1.88E-6	6.87E-5	1.15E-6	-8.58E-4	5.93E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.21E-6	2.27E-8	2.73E-13	1.24E-6	4.26E-8	2.15E-7	1.13E-9	-9.65E-7	5.29E-7
NHWD	kg	9.84E-3	5.49E-4	1.05E-6	1.04E-2	1.03E-3	6.30E-3	4.12E-3	-4.16E-3	1.77E-2
RWD	kg	3.14E-6	6.03E-8	1.10E-13	3.20E-6	1.13E-7	5.05E-7	6.11E-9	-1.69E-6	2.13E-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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