

Environmental Profile

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

Ecochain v3.5.80



Product: 3043800 - Wafix PP Bend 45° GY 50 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	1.09E-1	9.74E-4	1.45E-4	1.10E-1	1.51E-3	1.09E-1	7.12E-4	-7.84E-2	1.42E-1
GWP-f	kg CO2 eq	1.58E-1	9.73E-4	1.46E-4	1.59E-1	1.51E-3	5.35E-2	7.12E-4	-8.87E-2	1.26E-1
GWP-b	kg CO2 eq	-4.92E-2	5.91E-7	-1.54E-6	-4.92E-2	9.17E-7	5.50E-2	6.19E-7	1.04E-2	1.62E-2
GWP-luluc	kg CO2 eq	1.62E-4	3.45E-7	1.49E-7	1.63E-4	5.35E-7	9.04E-6	1.22E-8	-1.19E-4	5.34E-5
ODP	kg CFC11 eq	7.83E-9	2.24E-10	8.26E-12	8.06E-9	3.48E-10	1.37E-9	1.79E-11	-5.31E-9	4.49E-9
AP	mol H+ eq	6.57E-4	5.55E-6	1.47E-6	6.64E-4	8.61E-6	5.63E-5	4.27E-7	-3.04E-4	4.25E-4
EP-fw	kg P eq	3.83E-6	8.01E-9	8.24E-9	3.85E-6	1.24E-8	2.66E-7	5.59E-10	-2.16E-6	1.96E-6
EP-m	kg N eq	1.25E-4	1.98E-6	1.55E-7	1.27E-4	3.08E-6	1.72E-5	2.77E-7	-6.16E-5	8.57E-5
EP-T	mol N eq	1.37E-3	2.19E-5	1.85E-6	1.39E-3	3.39E-5	1.90E-4	1.73E-6	-6.98E-4	9.22E-4
POCP	kg NMVOC eq	5.48E-4	6.25E-6	6.28E-7	5.54E-4	9.70E-6	5.89E-5	6.50E-7	-2.74E-4	3.50E-4
ADP-mm	kg Sb eq	5.36E-6	2.52E-8	1.97E-8	5.41E-6	3.91E-8	2.20E-7	4.31E-10	-6.75E-7	4.99E-6
ADP-f	MJ	4.81E+0	1.49E-2	1.36E-3	4.83E+0	2.32E-2	1.65E-1	1.30E-3	-2.52E+0	2.50E+0
WDP	m3 depriv.	9.99E-2	4.59E-5	5.22E-5	1.00E-1	7.12E-5	3.03E-3	6.93E-6	-5.84E-2	4.47E-2
PM	disease inc.	6.88E-9	8.79E-11	9.08E-12	6.98E-9	1.36E-10	9.03E-10	8.97E-12	-3.70E-9	4.32E-9
IR	kBq U-235 eq	4.19E-3	6.53E-5	1.02E-6	4.26E-3	1.01E-4	5.23E-4	6.04E-6	-2.12E-3	2.77E-3
ETP-fw	CTUe	2.92E+0	1.21E-2	1.21E-2	2.95E+0	1.88E-2	1.97E-1	1.09E-3	-1.40E+0	1.76E+0
HTP-c	CTUh	8.73E-11	4.32E-13	6.17E-13	8.84E-11	6.70E-13	2.39E-11	3.21E-14	-3.70E-11	7.59E-11
HTP-nc	CTUh	1.73E-9	1.45E-11	1.57E-11	1.76E-9	2.25E-11	2.85E-10	7.05E-13	-5.86E-10	1.48E-9
SQP	Pt	4.90E+0	1.28E-2	2.24E-3	4.91E+0	1.98E-2	1.30E-1	3.35E-3	-5.62E+0	-5.57E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.15E+0	2.14E-4	2.40E-2	1.17E+0	3.33E-4	7.85E-3	5.03E-5	-9.29E-1	2.54E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.15E+0	2.14E-4	2.40E-2	1.17E+0	3.33E-4	7.85E-3	5.03E-5	-9.29E-1	2.54E-1
PENRE	MJ	5.16E+0	1.59E-2	1.44E-3	5.18E+0	2.46E-2	1.76E-1	1.38E-3	-2.71E+0	2.67E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.16E+0	1.59E-2	1.44E-3	5.18E+0	2.46E-2	1.76E-1	1.38E-3	-2.71E+0	2.67E+0
PET	MJ	6.31E+0	1.61E-2	2.55E-2	6.36E+0	2.50E-2	1.84E-1	1.43E-3	-3.64E+0	2.93E+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	1.81E-3	1.69E-6	1.46E-6	1.81E-3	2.62E-6	9.34E-5	1.61E-6	-1.09E-3	8.21E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.49E-6	3.82E-8	2.73E-13	1.53E-6	5.93E-8	2.87E-7	1.58E-9	-1.13E-6	7.41E-7
NHWD	kg	1.21E-2	9.26E-4	1.05E-6	1.30E-2	1.44E-3	8.42E-3	5.75E-3	-4.80E-3	2.38E-2
RWD	kg	4.25E-6	1.02E-7	1.10E-13	4.35E-6	1.58E-7	6.76E-7	8.51E-9	-2.06E-6	3.13E-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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