

Environmental Profile

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

Ecochain v3.5.80



Product: 3043895 - Wafix PP Bend 15° 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	8.79E-2	9.41E-4	1.45E-4	8.90E-2	1.25E-3	9.96E-2	5.88E-4	-6.67E-2	1.24E-1
GWP-f	kg CO2 eq	1.37E-1	9.40E-4	1.46E-4	1.38E-1	1.25E-3	4.57E-2	5.88E-4	-7.55E-2	1.10E-1
GWP-b	kg CO2 eq	-4.91E-2	5.71E-7	-1.54E-6	-4.91E-2	7.58E-7	5.40E-2	5.11E-7	8.95E-3	1.38E-2
GWP-luluc	kg CO2 eq	1.43E-4	3.33E-7	1.49E-7	1.44E-4	4.42E-7	7.51E-6	1.01E-8	-1.04E-4	4.74E-5
ODP	kg CFC11 eq	7.27E-9	2.17E-10	8.26E-12	7.49E-9	2.88E-10	1.15E-9	1.48E-11	-4.72E-9	4.22E-9
AP	mol H+ eq	5.89E-4	5.35E-6	1.47E-6	5.96E-4	7.11E-6	4.73E-5	3.53E-7	-2.61E-4	3.89E-4
EP-fw	kg P eq	3.46E-6	7.73E-9	8.24E-9	3.48E-6	1.03E-8	2.21E-7	4.63E-10	-1.88E-6	1.84E-6
EP-m	kg N eq	1.11E-4	1.92E-6	1.55E-7	1.13E-4	2.54E-6	1.45E-5	2.28E-7	-5.35E-5	7.64E-5
EP-T	mol N eq	1.22E-3	2.11E-5	1.85E-6	1.25E-3	2.80E-5	1.60E-4	1.43E-6	-6.07E-4	8.28E-4
POCP	kg NMVOC eq	4.84E-4	6.04E-6	6.28E-7	4.91E-4	8.01E-6	4.96E-5	5.37E-7	-2.37E-4	3.12E-4
ADP-mm	kg Sb eq	5.36E-6	2.43E-8	1.97E-8	5.40E-6	3.23E-8	1.84E-7	3.56E-10	-5.82E-7	5.04E-6
ADP-f	MJ	4.07E+0	1.44E-2	1.36E-3	4.09E+0	1.92E-2	1.38E-1	1.08E-3	-2.11E+0	2.13E+0
WDP	m3 depriv.	8.55E-2	4.43E-5	5.22E-5	8.56E-2	5.88E-5	2.52E-3	5.89E-6	-4.92E-2	3.90E-2
PM	disease inc.	6.19E-9	8.48E-11	9.08E-12	6.29E-9	1.13E-10	7.55E-10	7.41E-12	-3.25E-9	3.91E-9
IR	kBq U-235 eq	3.74E-3	6.31E-5	1.02E-6	3.81E-3	8.37E-5	4.38E-4	4.99E-6	-1.83E-3	2.50E-3
ETP-fw	CTUe	2.71E+0	1.17E-2	1.21E-2	2.74E+0	1.56E-2	1.65E-1	9.02E-4	-1.22E+0	1.70E+0
HTP-c	CTUh	8.83E-11	4.17E-13	6.17E-13	8.93E-11	5.53E-13	2.02E-11	2.67E-14	-3.39E-11	7.62E-11
HTP-nc	CTUh	1.73E-9	1.40E-11	1.57E-11	1.76E-9	1.85E-11	2.39E-10	5.83E-13	-4.93E-10	1.53E-9
SQP	Pt	4.82E+0	1.23E-2	2.24E-3	4.83E+0	1.64E-2	1.08E-1	2.76E-3	-5.29E+0	-3.34E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.36E+0	2.07E-4	2.40E-2	1.39E+0	2.75E-4	6.53E-3	4.15E-5	-8.65E-1	5.27E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.36E+0	2.07E-4	2.40E-2	1.39E+0	2.75E-4	6.53E-3	4.15E-5	-8.65E-1	5.27E-1
PENRE	MJ	4.37E+0	1.53E-2	1.44E-3	4.38E+0	2.03E-2	1.47E-1	1.14E-3	-2.28E+0	2.28E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.37E+0	1.53E-2	1.44E-3	4.38E+0	2.03E-2	1.47E-1	1.14E-3	-2.28E+0	2.28E+0
PET	MJ	5.73E+0	1.55E-2	2.55E-2	5.77E+0	2.06E-2	1.53E-1	1.19E-3	-3.14E+0	2.80E+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	1.58E-3	1.63E-6	1.46E-6	1.58E-3	2.17E-6	7.79E-5	1.33E-6	-9.20E-4	7.44E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.37E-6	3.69E-8	2.73E-13	1.41E-6	4.90E-8	2.40E-7	1.30E-9	-1.02E-6	6.76E-7
NHWD	kg	1.11E-2	8.94E-4	1.05E-6	1.20E-2	1.19E-3	7.08E-3	4.75E-3	-4.34E-3	2.07E-2
RWD	kg	3.83E-6	9.81E-8	1.10E-13	3.93E-6	1.30E-7	5.66E-7	7.03E-9	-1.79E-6	2.84E-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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