

Environmental Profile

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

Ecochain v3.5.80



Product: 3020595 - Wafix PP Bend 45° WT 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	1.08E-1	9.83E-4	1.45E-4	1.09E-1	1.49E-3	1.09E-1	7.00E-4	-7.80E-2	1.42E-1
GWP-f	kg CO2 eq	1.57E-1	9.82E-4	1.46E-4	1.58E-1	1.48E-3	5.39E-2	7.00E-4	-8.83E-2	1.26E-1
GWP-b	kg CO2 eq	-4.92E-2	5.97E-7	-1.54E-6	-4.92E-2	9.01E-7	5.50E-2	6.09E-7	1.04E-2	1.62E-2
GWP-luluc	kg CO2 eq	1.63E-4	3.48E-7	1.49E-7	1.63E-4	5.25E-7	8.91E-6	1.20E-8	-1.19E-4	5.40E-5
ODP	kg CFC11 eq	7.83E-9	2.26E-10	8.26E-12	8.07E-9	3.42E-10	1.35E-9	1.76E-11	-5.34E-9	4.44E-9
AP	mol H+ eq	6.56E-4	5.60E-6	1.47E-6	6.63E-4	8.46E-6	5.57E-5	4.19E-7	-3.02E-4	4.26E-4
EP-fw	kg P eq	3.85E-6	8.08E-9	8.24E-9	3.86E-6	1.22E-8	2.62E-7	5.49E-10	-2.15E-6	1.99E-6
EP-m	kg N eq	1.25E-4	2.00E-6	1.55E-7	1.27E-4	3.03E-6	1.71E-5	2.72E-7	-6.12E-5	8.59E-5
EP-T	mol N eq	1.37E-3	2.21E-5	1.85E-6	1.39E-3	3.33E-5	1.88E-4	1.70E-6	-6.93E-4	9.24E-4
POCP	kg NMVOC eq	5.47E-4	6.31E-6	6.28E-7	5.54E-4	9.53E-6	5.84E-5	6.38E-7	-2.72E-4	3.51E-4
ADP-mm	kg Sb eq	5.36E-6	2.54E-8	1.97E-8	5.41E-6	3.84E-8	2.17E-7	4.23E-10	-6.67E-7	5.00E-6
ADP-f	MJ	4.78E+0	1.51E-2	1.36E-3	4.80E+0	2.28E-2	1.63E-1	1.28E-3	-2.49E+0	2.49E+0
WDP	m3 depriv.	9.96E-2	4.63E-5	5.22E-5	9.97E-2	6.99E-5	2.99E-3	6.83E-6	-5.78E-2	4.49E-2
PM	disease inc.	6.87E-9	8.87E-11	9.08E-12	6.97E-9	1.34E-10	8.92E-10	8.82E-12	-3.68E-9	4.33E-9
IR	kBq U-235 eq	4.19E-3	6.59E-5	1.02E-6	4.26E-3	9.96E-5	5.16E-4	5.94E-6	-2.11E-3	2.77E-3
ETP-fw	CTUe	2.93E+0	1.22E-2	1.21E-2	2.95E+0	1.85E-2	1.95E-1	1.07E-3	-1.40E+0	1.77E+0
HTP-c	CTUh	8.73E-11	4.36E-13	6.17E-13	8.84E-11	6.59E-13	2.37E-11	3.16E-14	-3.69E-11	7.59E-11
HTP-nc	CTUh	1.73E-9	1.46E-11	1.57E-11	1.76E-9	2.21E-11	2.82E-10	6.92E-13	-5.81E-10	1.48E-9
SQP	Pt	4.90E+0	1.29E-2	2.24E-3	4.92E+0	1.95E-2	1.28E-1	3.29E-3	-5.62E+0	-5.54E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.15E+0	2.16E-4	2.40E-2	1.17E+0	3.27E-4	7.73E-3	4.94E-5	-9.28E-1	2.54E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.15E+0	2.16E-4	2.40E-2	1.17E+0	3.27E-4	7.73E-3	4.94E-5	-9.28E-1	2.54E-1
PENRE	MJ	5.13E+0	1.60E-2	1.44E-3	5.14E+0	2.42E-2	1.73E-1	1.36E-3	-2.68E+0	2.66E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.13E+0	1.60E-2	1.44E-3	5.14E+0	2.42E-2	1.73E-1	1.36E-3	-2.68E+0	2.66E+0
PET	MJ	6.28E+0	1.62E-2	2.55E-2	6.32E+0	2.45E-2	1.81E-1	1.41E-3	-3.61E+0	2.91E+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	1.71E-6	1.46E-6	1.81E-3	2.58E-6	9.22E-5	1.58E-6	-1.08E-3	8.32E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.49E-6	3.86E-8	2.73E-13	1.53E-6	5.83E-8	2.84E-7	1.55E-9	-1.14E-6	7.32E-7
NHWD	kg	1.22E-2	9.35E-4	1.05E-6	1.31E-2	1.41E-3	8.35E-3	5.65E-3	-4.78E-3	2.37E-2
RWD	kg	4.25E-6	1.03E-7	1.10E-13	4.35E-6	1.55E-7	6.67E-7	8.37E-9	-2.05E-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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