

Environmental Profile

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

Ecochain v3.5.80



Product: 3043827 - Wafix PP Bend 45° 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	8.93E-2	6.11E-4	1.45E-4	9.01E-2	1.30E-3	1.02E-1	6.10E-4	-6.84E-2	1.26E-1
GWP-f	kg CO2 eq	1.38E-1	6.11E-4	1.46E-4	1.39E-1	1.29E-3	4.73E-2	6.10E-4	-7.87E-2	1.10E-1
GWP-b	kg CO2 eq	-4.92E-2	3.71E-7	-1.54E-6	-4.92E-2	7.86E-7	5.50E-2	5.31E-7	1.04E-2	1.62E-2
GWP-luluc	kg CO2 eq	1.55E-4	2.16E-7	1.49E-7	1.55E-4	4.58E-7	7.83E-6	1.05E-8	-1.17E-4	4.62E-5
ODP	kg CFC11 eq	6.44E-9	1.41E-10	8.26E-12	6.59E-9	2.98E-10	1.21E-9	1.53E-11	-4.94E-9	3.17E-9
AP	mol H+ eq	5.73E-4	3.48E-6	1.47E-6	5.78E-4	7.38E-6	4.97E-5	3.66E-7	-2.76E-4	3.59E-4
EP-fw	kg P eq	3.44E-6	5.03E-9	8.24E-9	3.45E-6	1.07E-8	2.31E-7	4.80E-10	-2.05E-6	1.64E-6
EP-m	kg N eq	1.11E-4	1.25E-6	1.55E-7	1.13E-4	2.64E-6	1.53E-5	2.37E-7	-5.66E-5	7.42E-5
EP-T	mol N eq	1.22E-3	1.37E-5	1.85E-6	1.23E-3	2.91E-5	1.68E-4	1.48E-6	-6.43E-4	7.88E-4
POCP	kg NMVOC eq	4.82E-4	3.92E-6	6.28E-7	4.86E-4	8.32E-6	5.22E-5	5.57E-7	-2.49E-4	2.99E-4
ADP-mm	kg Sb eq	3.61E-6	1.58E-8	1.97E-8	3.64E-6	3.35E-8	1.94E-7	3.70E-10	-6.09E-7	3.26E-6
ADP-f	MJ	4.19E+0	9.38E-3	1.36E-3	4.20E+0	1.99E-2	1.44E-1	1.12E-3	-2.20E+0	2.16E+0
WDP	m3 depriv.	8.68E-2	2.88E-5	5.22E-5	8.68E-2	6.10E-5	2.62E-3	6.08E-6	-5.29E-2	3.66E-2
PM	disease inc.	6.10E-9	5.51E-11	9.08E-12	6.16E-9	1.17E-10	7.94E-10	7.69E-12	-3.47E-9	3.61E-9
IR	kBq U-235 eq	3.52E-3	4.10E-5	1.02E-6	3.56E-3	8.69E-5	4.60E-4	5.18E-6	-1.98E-3	2.14E-3
ETP-fw	CTUe	2.71E+0	7.61E-3	1.21E-2	2.73E+0	1.61E-2	1.74E-1	9.36E-4	-1.36E+0	1.56E+0
HTP-c	CTUh	7.96E-11	2.71E-13	6.17E-13	8.05E-11	5.74E-13	2.11E-11	2.77E-14	-3.53E-11	6.68E-11
HTP-nc	CTUh	1.53E-9	9.08E-12	1.57E-11	1.55E-9	1.92E-11	2.50E-10	6.05E-13	-5.39E-10	1.28E-9
SQP	Pt	4.84E+0	8.02E-3	2.24E-3	4.85E+0	1.70E-2	1.13E-1	2.87E-3	-5.61E+0	-6.27E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.08E+0	1.35E-4	2.40E-2	1.11E+0	2.85E-4	6.81E-3	4.31E-5	-9.25E-1	1.89E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.08E+0	1.35E-4	2.40E-2	1.11E+0	2.85E-4	6.81E-3	4.31E-5	-9.25E-1	1.89E-1
PENRE	MJ	4.49E+0	9.95E-3	1.44E-3	4.51E+0	2.11E-2	1.54E-1	1.19E-3	-2.37E+0	2.31E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.49E+0	9.95E-3	1.44E-3	4.51E+0	2.11E-2	1.54E-1	1.19E-3	-2.37E+0	2.31E+0
PET	MJ	5.58E+0	1.01E-2	2.55E-2	5.61E+0	2.14E-2	1.60E-1	1.23E-3	-3.29E+0	2.50E+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	1.57E-3	1.06E-6	1.46E-6	1.57E-3	2.25E-6	8.12E-5	1.38E-6	-1.00E-3	6.53E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.32E-6	2.40E-8	2.73E-13	1.34E-6	5.08E-8	2.53E-7	1.35E-9	-1.06E-6	5.90E-7
NHWD	kg	1.07E-2	5.81E-4	1.05E-6	1.13E-2	1.23E-3	7.39E-3	4.93E-3	-4.56E-3	2.03E-2
RWD	kg	3.49E-6	6.38E-8	1.10E-13	3.56E-6	1.35E-7	5.95E-7	7.30E-9	-1.93E-6	2.37E-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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