

Environmental Profile

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

Ecochain v3.5.80



Product: 3020600 - Wafix PP Bend 88° 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	1.09E-1	1.04E-3	1.45E-4	1.10E-1	1.72E-3	1.62E-1	8.12E-4	-9.16E-2	1.83E-1
GWP-f	kg CO2 eq	2.07E-1	1.04E-3	1.46E-4	2.08E-1	1.72E-3	5.65E-2	8.12E-4	-1.05E-1	1.63E-1
GWP-b	kg CO2 eq	-9.79E-2	6.33E-7	-1.54E-6	-9.79E-2	1.05E-6	1.05E-1	7.08E-7	1.30E-2	2.05E-2
GWP-luluc	kg CO2 eq	2.26E-4	3.69E-7	1.49E-7	2.27E-4	6.09E-7	1.04E-5	1.36E-8	-1.64E-4	7.40E-5
ODP	kg CFC11 eq	1.23E-8	2.40E-10	8.26E-12	1.26E-8	3.97E-10	1.61E-9	2.03E-11	-5.91E-9	8.71E-9
AP	mol H+ eq	9.03E-4	5.94E-6	1.47E-6	9.10E-4	9.81E-6	6.59E-5	4.84E-7	-3.87E-4	6.00E-4
EP-fw	kg P eq	5.17E-6	8.58E-9	8.24E-9	5.19E-6	1.42E-8	3.07E-7	6.27E-10	-2.81E-6	2.70E-6
EP-m	kg N eq	1.79E-4	2.13E-6	1.55E-7	1.82E-4	3.51E-6	2.03E-5	3.17E-7	-8.09E-5	1.25E-4
EP-T	mol N eq	1.99E-3	2.34E-5	1.85E-6	2.02E-3	3.87E-5	2.23E-4	1.97E-6	-9.22E-4	1.36E-3
POCP	kg NMVOC eq	7.59E-4	6.70E-6	6.28E-7	7.67E-4	1.11E-5	6.92E-5	7.39E-7	-3.58E-4	4.90E-4
ADP-mm	kg Sb eq	7.18E-6	2.70E-8	1.97E-8	7.22E-6	4.45E-8	2.58E-7	4.86E-10	-8.55E-7	6.67E-6
ADP-f	MJ	5.91E+0	1.60E-2	1.36E-3	5.93E+0	2.64E-2	1.92E-1	1.48E-3	-2.93E+0	3.21E+0
WDP	m3 depriv.	1.21E-1	4.91E-5	5.22E-5	1.21E-1	8.11E-5	3.47E-3	6.79E-6	-6.86E-2	5.61E-2
PM	disease inc.	9.98E-9	9.42E-11	9.08E-12	1.01E-8	1.55E-10	1.05E-9	1.02E-11	-5.10E-9	6.21E-9
IR	kBq U-235 eq	5.79E-3	7.00E-5	1.02E-6	5.86E-3	1.16E-4	6.15E-4	6.90E-6	-2.71E-3	3.89E-3
ETP-fw	CTUe	4.10E+0	1.30E-2	1.21E-2	4.13E+0	2.15E-2	2.29E-1	1.24E-3	-1.85E+0	2.53E+0
HTP-c	CTUh	1.42E-10	4.63E-13	6.17E-13	1.43E-10	7.64E-13	2.68E-11	3.58E-14	-5.74E-11	1.13E-10
HTP-nc	CTUh	2.66E-9	1.55E-11	1.57E-11	2.69E-9	2.56E-11	3.25E-10	7.96E-13	-7.71E-10	2.27E-9
SQP	Pt	9.33E+0	1.37E-2	2.24E-3	9.35E+0	2.26E-2	1.50E-1	3.81E-3	-9.59E+0	-6.60E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.29E+0	2.30E-4	2.40E-2	2.31E+0	3.79E-4	9.06E-3	5.79E-5	-1.54E+0	7.79E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.29E+0	2.30E-4	2.40E-2	2.31E+0	3.79E-4	9.06E-3	5.79E-5	-1.54E+0	7.79E-1
PENRE	MJ	6.34E+0	1.70E-2	1.44E-3	6.36E+0	2.81E-2	2.05E-1	1.57E-3	-3.16E+0	3.43E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.34E+0	1.70E-2	1.44E-3	6.36E+0	2.81E-2	2.05E-1	1.57E-3	-3.16E+0	3.43E+0
PET	MJ	8.63E+0	1.72E-2	2.55E-2	8.67E+0	2.84E-2	2.14E-1	1.63E-3	-4.70E+0	4.21E+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	2.25E-3	1.81E-6	1.46E-6	2.25E-3	2.99E-6	1.07E-4	1.83E-6	-1.32E-3	1.04E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.50E-6	4.09E-8	2.73E-13	2.54E-6	6.76E-8	3.36E-7	1.78E-9	-1.48E-6	1.47E-6
NHWD	kg	2.45E-2	9.92E-4	1.05E-6	2.54E-2	1.64E-3	9.59E-3	6.55E-3	-7.15E-3	3.61E-2
RWD	kg	6.17E-6	1.09E-7	1.10E-13	6.28E-6	1.80E-7	7.97E-7	9.70E-9	-2.68E-6	4.58E-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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