

Environmental Profile

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

Ecochain v3.5.80



Product: 3043878 - Wafix PP Bend 30° GY 40 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	6.43E-2	5.40E-4	1.45E-4	6.50E-2	9.54E-4	9.01E-2	4.49E-4	-5.39E-2	1.03E-1
GWP-f	kg CO2 eq	1.13E-1	5.40E-4	1.46E-4	1.14E-1	9.53E-4	3.70E-2	4.49E-4	-6.08E-2	9.18E-2
GWP-b	kg CO2 eq	-4.93E-2	3.28E-7	-1.54E-6	-4.93E-2	5.79E-7	5.31E-2	3.90E-7	6.98E-3	1.08E-2
GWP-luluc	kg CO2 eq	1.27E-4	1.91E-7	1.49E-7	1.27E-4	3.37E-7	5.81E-6	7.81E-9	-8.76E-5	4.55E-5
ODP	kg CFC11 eq	6.23E-9	1.24E-10	8.26E-12	6.37E-9	2.20E-10	9.02E-10	1.13E-11	-4.07E-9	3.43E-9
AP	mol H+ eq	5.01E-4	3.07E-6	1.47E-6	5.06E-4	5.43E-6	3.73E-5	2.70E-7	-2.14E-4	3.35E-4
EP-fw	kg P eq	3.02E-6	4.44E-9	8.24E-9	3.03E-6	7.84E-9	1.72E-7	3.56E-10	-1.55E-6	1.66E-6
EP-m	kg N eq	9.40E-5	1.10E-6	1.55E-7	9.52E-5	1.94E-6	1.15E-5	1.74E-7	-4.46E-5	6.43E-5
EP-T	mol N eq	1.04E-3	1.21E-5	1.85E-6	1.05E-3	2.14E-5	1.27E-4	1.09E-6	-5.07E-4	6.97E-4
POCP	kg NMVOC eq	4.10E-4	3.47E-6	6.28E-7	4.14E-4	6.12E-6	3.93E-5	4.10E-7	-1.97E-4	2.63E-4
ADP-mm	kg Sb eq	4.54E-6	1.40E-8	1.97E-8	4.57E-6	2.47E-8	1.44E-7	2.73E-10	-4.78E-7	4.26E-6
ADP-f	MJ	3.30E+0	8.29E-3	1.36E-3	3.31E+0	1.46E-2	1.07E-1	8.24E-4	-1.66E+0	1.77E+0
WDP	m3 depriv.	7.02E-2	2.54E-5	5.22E-5	7.03E-2	4.49E-5	1.94E-3	4.73E-6	-3.89E-2	3.34E-2
PM	disease inc.	5.32E-9	4.87E-11	9.08E-12	5.38E-9	8.60E-11	5.92E-10	5.66E-12	-2.74E-9	3.33E-9
IR	kBq U-235 eq	3.15E-3	3.62E-5	1.02E-6	3.19E-3	6.39E-5	3.43E-4	3.81E-6	-1.51E-3	2.09E-3
ETP-fw	CTUe	2.35E+0	6.73E-3	1.21E-2	2.37E+0	1.19E-2	1.29E-1	6.89E-4	-1.01E+0	1.50E+0
HTP-c	CTUh	8.24E-11	2.39E-13	6.17E-13	8.32E-11	4.23E-13	1.60E-11	2.06E-14	-3.05E-11	6.92E-11
HTP-nc	CTUh	1.57E-9	8.02E-12	1.57E-11	1.60E-9	1.42E-11	1.87E-10	4.46E-13	-3.88E-10	1.41E-9
SQP	Pt	4.70E+0	7.09E-3	2.24E-3	4.71E+0	1.25E-2	8.41E-2	2.11E-3	-4.92E+0	-1.08E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.37E+0	1.19E-4	2.40E-2	1.39E+0	2.10E-4	5.06E-3	3.16E-5	-7.95E-1	6.04E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.37E+0	1.19E-4	2.40E-2	1.39E+0	2.10E-4	5.06E-3	3.16E-5	-7.95E-1	6.04E-1
PENRE	MJ	3.54E+0	8.80E-3	1.44E-3	3.55E+0	1.55E-2	1.14E-1	8.74E-4	-1.79E+0	1.89E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.54E+0	8.80E-3	1.44E-3	3.55E+0	1.55E-2	1.14E-1	8.74E-4	-1.79E+0	1.89E+0
PET	MJ	4.91E+0	8.92E-3	2.55E-2	4.94E+0	1.57E-2	1.19E-1	9.06E-4	-2.59E+0	2.49E+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	1.33E-3	9.38E-7	1.46E-6	1.33E-3	1.66E-6	6.06E-5	1.01E-6	-7.33E-4	6.58E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.19E-6	2.12E-8	2.73E-13	1.21E-6	3.74E-8	1.89E-7	9.98E-10	-8.96E-7	5.42E-7
NHWD	kg	9.57E-3	5.14E-4	1.05E-6	1.01E-2	9.07E-4	5.60E-3	3.62E-3	-3.85E-3	1.64E-2
RWD	kg	3.23E-6	5.63E-8	1.10E-13	3.28E-6	9.95E-8	4.45E-7	5.37E-9	-1.49E-6	2.34E-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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