

Environmental Profile

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

Ecochain v3.5.80



Product: 3020577 - Wafix PP Bend 45° BK 32 S/S
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

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.

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



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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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	8.13E-2	6.64E-4	1.45E-4	8.21E-2	8.11E-4	7.92E-2	3.82E-4	-4.47E-2	1.18E-1
GWP-f	kg CO2 eq	1.30E-1	6.64E-4	1.46E-4	1.31E-1	8.11E-4	2.75E-2	3.82E-4	-4.94E-2	1.11E-1
GWP-b	kg CO2 eq	-4.93E-2	4.03E-7	-1.54E-6	-4.93E-2	4.92E-7	5.17E-2	3.34E-7	4.77E-3	7.23E-3
GWP-luluc	kg CO2 eq	1.28E-4	2.35E-7	1.49E-7	1.28E-4	2.87E-7	4.88E-6	6.41E-9	-6.83E-5	6.49E-5
ODP	kg CFC11 eq	1.26E-8	1.53E-10	8.26E-12	1.27E-8	1.87E-10	7.43E-10	9.58E-12	-2.78E-9	1.09E-8
AP	mol H+ eq	6.23E-4	3.78E-6	1.47E-6	6.29E-4	4.62E-6	3.06E-5	2.28E-7	-1.78E-4	4.86E-4
EP-fw	kg P eq	3.59E-6	5.46E-9	8.24E-9	3.60E-6	6.67E-9	1.44E-7	2.95E-10	-1.22E-6	2.54E-6
EP-m	kg N eq	1.13E-4	1.35E-6	1.55E-7	1.15E-4	1.65E-6	9.38E-6	1.49E-7	-3.74E-5	8.86E-5
EP-T	mol N eq	1.29E-3	1.49E-5	1.85E-6	1.31E-3	1.82E-5	1.03E-4	9.27E-7	-4.26E-4	1.01E-3
POCP	kg NMVOC eq	4.99E-4	4.26E-6	6.28E-7	5.04E-4	5.21E-6	3.20E-5	3.48E-7	-1.68E-4	3.74E-4
ADP-mm	kg Sb eq	1.32E-5	1.72E-8	1.97E-8	1.32E-5	2.10E-8	1.19E-7	2.29E-10	-4.00E-7	1.30E-5
ADP-f	MJ	3.64E+0	1.02E-2	1.36E-3	3.65E+0	1.24E-2	8.95E-2	6.99E-4	-1.39E+0	2.37E+0
WDP	m3 depriv.	8.16E-2	3.13E-5	5.22E-5	8.17E-2	3.82E-5	1.63E-3	3.20E-6	-3.04E-2	5.30E-2
PM	disease inc.	6.80E-9	5.99E-11	9.08E-12	6.87E-9	7.32E-11	4.88E-10	4.81E-12	-2.32E-9	5.12E-9
IR	kBq U-235 eq	5.43E-3	4.45E-5	1.02E-6	5.48E-3	5.44E-5	2.85E-4	3.25E-6	-1.21E-3	4.61E-3
ETP-fw	CTUe	2.48E+0	8.27E-3	1.21E-2	2.50E+0	1.01E-2	1.06E-1	5.85E-4	-7.72E-1	1.84E+0
HTP-c	CTUh	8.38E-11	2.94E-13	6.17E-13	8.47E-11	3.60E-13	1.26E-11	1.68E-14	-2.72E-11	7.05E-11
HTP-nc	CTUh	1.64E-9	9.86E-12	1.57E-11	1.67E-9	1.20E-11	1.52E-10	3.75E-13	-3.38E-10	1.49E-9
SQP	Pt	4.78E+0	8.72E-3	2.24E-3	4.79E+0	1.06E-2	7.04E-2	1.80E-3	-4.45E+0	4.17E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.37E-1	1.46E-4	2.40E-2	9.61E-1	1.79E-4	4.24E-3	2.72E-5	-7.08E-1	2.57E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.37E-1	1.46E-4	2.40E-2	9.61E-1	1.79E-4	4.24E-3	2.72E-5	-7.08E-1	2.57E-1
PENRE	MJ	3.90E+0	1.08E-2	1.44E-3	3.91E+0	1.32E-2	9.53E-2	7.42E-4	-1.49E+0	2.53E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.90E+0	1.08E-2	1.44E-3	3.91E+0	1.32E-2	9.53E-2	7.42E-4	-1.49E+0	2.53E+0
PET	MJ	4.84E+0	1.10E-2	2.55E-2	4.87E+0	1.34E-2	9.95E-2	7.69E-4	-2.20E+0	2.79E+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	1.70E-3	1.15E-6	1.46E-6	1.70E-3	1.41E-6	5.04E-5	8.63E-7	-5.72E-4	1.18E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.81E-6	2.61E-8	2.73E-13	1.83E-6	3.18E-8	1.55E-7	8.39E-10	-7.09E-7	1.31E-6
NHWD	kg	1.60E-2	6.32E-4	1.05E-6	1.67E-2	7.71E-4	4.52E-3	3.08E-3	-3.36E-3	2.17E-2
RWD	kg	6.28E-6	6.93E-8	1.10E-13	6.35E-6	8.46E-8	3.69E-7	4.57E-9	-1.20E-6	5.61E-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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