

Environmental Profile

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

Ecochain v3.5.80



Product: 3043799 - Wafix PP Bend 45° GY 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	7.03E-2	6.64E-4	1.45E-4	7.11E-2	7.35E-4	7.70E-2	3.46E-4	-4.12E-2	1.08E-1
GWP-f	kg CO2 eq	1.19E-1	6.64E-4	1.46E-4	1.20E-1	7.34E-4	2.53E-2	3.46E-4	-4.59E-2	1.00E-1
GWP-b	kg CO2 eq	-4.91E-2	4.03E-7	-1.54E-6	-4.91E-2	4.46E-7	5.17E-2	3.02E-7	4.78E-3	7.47E-3
GWP-luluc	kg CO2 eq	1.17E-4	2.35E-7	1.49E-7	1.18E-4	2.60E-7	4.45E-6	5.80E-9	-6.76E-5	5.50E-5
ODP	kg CFC11 eq	9.22E-9	1.53E-10	8.26E-12	9.39E-9	1.69E-10	6.88E-10	8.68E-12	-2.65E-9	7.60E-9
AP	mol H+ eq	5.53E-4	3.78E-6	1.47E-6	5.58E-4	4.18E-6	2.83E-5	2.07E-7	-1.68E-4	4.23E-4
EP-fw	kg P eq	3.10E-6	5.46E-9	8.24E-9	3.11E-6	6.04E-9	1.31E-7	2.67E-10	-1.18E-6	2.07E-6
EP-m	kg N eq	1.03E-4	1.35E-6	1.55E-7	1.04E-4	1.50E-6	8.70E-6	1.35E-7	-3.56E-5	7.91E-5
EP-T	mol N eq	1.17E-3	1.49E-5	1.85E-6	1.19E-3	1.65E-5	9.58E-5	8.40E-7	-4.06E-4	8.96E-4
POCP	kg NMVOC eq	4.44E-4	4.26E-6	6.28E-7	4.49E-4	4.72E-6	2.96E-5	3.15E-7	-1.59E-4	3.25E-4
ADP-mm	kg Sb eq	8.11E-6	1.72E-8	1.97E-8	8.15E-6	1.90E-8	1.10E-7	2.08E-10	-3.76E-7	7.90E-6
ADP-f	MJ	3.33E+0	1.02E-2	1.36E-3	3.34E+0	1.13E-2	8.21E-2	6.33E-4	-1.27E+0	2.16E+0
WDP	m3 depriv.	7.40E-2	3.13E-5	5.22E-5	7.41E-2	3.46E-5	1.48E-3	2.90E-6	-2.84E-2	4.72E-2
PM	disease inc.	5.97E-9	5.99E-11	9.08E-12	6.04E-9	6.63E-11	4.50E-10	4.35E-12	-2.23E-9	4.33E-9
IR	kBq U-235 eq	4.10E-3	4.45E-5	1.02E-6	4.15E-3	4.93E-5	2.63E-4	2.94E-6	-1.16E-3	3.31E-3
ETP-fw	CTUe	2.20E+0	8.27E-3	1.21E-2	2.22E+0	9.15E-3	9.72E-2	5.30E-4	-7.58E-1	1.57E+0
HTP-c	CTUh	7.64E-11	2.94E-13	6.17E-13	7.73E-11	3.26E-13	1.16E-11	1.53E-14	-2.66E-11	6.26E-11
HTP-nc	CTUh	1.47E-9	9.86E-12	1.57E-11	1.49E-9	1.09E-11	1.40E-10	3.40E-13	-3.21E-10	1.32E-9
SQP	Pt	4.69E+0	8.72E-3	2.24E-3	4.70E+0	9.64E-3	6.44E-2	1.63E-3	-4.45E+0	3.25E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.03E-1	1.46E-4	2.40E-2	9.27E-1	1.62E-4	3.88E-3	2.47E-5	-7.07E-1	2.25E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.03E-1	1.46E-4	2.40E-2	9.27E-1	1.62E-4	3.88E-3	2.47E-5	-7.07E-1	2.25E-1
PENRE	MJ	3.57E+0	1.08E-2	1.44E-3	3.58E+0	1.20E-2	8.74E-2	6.72E-4	-1.37E+0	2.31E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.57E+0	1.08E-2	1.44E-3	3.58E+0	1.20E-2	8.74E-2	6.72E-4	-1.37E+0	2.31E+0
PET	MJ	4.47E+0	1.10E-2	2.55E-2	4.51E+0	1.21E-2	9.13E-2	6.96E-4	-2.08E+0	2.54E+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	1.47E-3	1.15E-6	1.46E-6	1.47E-3	1.28E-6	4.61E-5	7.82E-7	-5.43E-4	9.76E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.57E-6	2.61E-8	2.73E-13	1.59E-6	2.88E-8	1.43E-7	7.60E-10	-6.83E-7	1.08E-6
NHWD	kg	1.46E-2	6.32E-4	1.05E-6	1.52E-2	6.99E-4	4.16E-3	2.79E-3	-3.27E-3	1.96E-2
RWD	kg	4.56E-6	6.93E-8	1.10E-13	4.63E-6	7.67E-8	3.40E-7	4.14E-9	-1.16E-6	3.89E-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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