

Environmental Profile

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

Ecochain v3.5.80



Product: 3020589 - Wafix PP Bend 88° BK 40 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	9.51E-2	9.00E-4	1.45E-4	9.61E-2	1.14E-3	9.04E-2	5.39E-4	-5.96E-2	1.29E-1
GWP-f	kg CO2 eq	1.44E-1	8.99E-4	1.46E-4	1.45E-1	1.14E-3	3.74E-2	5.39E-4	-6.65E-2	1.18E-1
GWP-b	kg CO2 eq	-4.90E-2	5.46E-7	-1.54E-6	-4.90E-2	6.94E-7	5.31E-2	4.70E-7	6.96E-3	1.10E-2
GWP-luluc	kg CO2 eq	1.38E-4	3.18E-7	1.49E-7	1.39E-4	4.04E-7	6.83E-6	9.03E-9	-8.86E-5	5.74E-5
ODP	kg CFC11 eq	9.62E-9	2.07E-10	8.26E-12	9.84E-9	2.63E-10	1.03E-9	1.35E-11	-3.55E-9	7.59E-9
AP	mol H+ eq	6.28E-4	5.12E-6	1.47E-6	6.35E-4	6.51E-6	4.23E-5	3.21E-7	-2.35E-4	4.49E-4
EP-fw	kg P eq	3.53E-6	7.40E-9	8.24E-9	3.54E-6	9.40E-9	2.01E-7	4.16E-10	-1.61E-6	2.14E-6
EP-m	kg N eq	1.21E-4	1.83E-6	1.55E-7	1.23E-4	2.33E-6	1.29E-5	2.11E-7	-4.80E-5	9.03E-5
EP-T	mol N eq	1.35E-3	2.02E-5	1.85E-6	1.38E-3	2.57E-5	1.42E-4	1.31E-6	-5.45E-4	9.99E-4
POCP	kg NMVOC eq	5.25E-4	5.77E-6	6.28E-7	5.31E-4	7.34E-6	4.41E-5	4.90E-7	-2.16E-4	3.67E-4
ADP-mm	kg Sb eq	7.47E-6	2.33E-8	1.97E-8	7.51E-6	2.96E-8	1.66E-7	3.23E-10	-5.19E-7	7.18E-6
ADP-f	MJ	4.20E+0	1.38E-2	1.36E-3	4.21E+0	1.75E-2	1.25E-1	9.85E-4	-1.90E+0	2.46E+0
WDP	m3 depriv.	8.75E-2	4.23E-5	5.22E-5	8.76E-2	5.38E-5	2.29E-3	4.51E-6	-4.24E-2	4.75E-2
PM	disease inc.	6.79E-9	8.11E-11	9.08E-12	6.88E-9	1.03E-10	6.78E-10	6.77E-12	-2.93E-9	4.73E-9
IR	kBq U-235 eq	4.50E-3	6.03E-5	1.02E-6	4.56E-3	7.66E-5	3.95E-4	4.58E-6	-1.59E-3	3.45E-3
ETP-fw	CTUe	2.56E+0	1.12E-2	1.21E-2	2.59E+0	1.42E-2	1.48E-1	8.24E-4	-1.03E+0	1.72E+0
HTP-c	CTUh	8.75E-11	3.99E-13	6.17E-13	8.86E-11	5.07E-13	1.73E-11	2.37E-14	-3.13E-11	7.51E-11
HTP-nc	CTUh	1.70E-9	1.34E-11	1.57E-11	1.73E-9	1.70E-11	2.11E-10	5.29E-13	-4.11E-10	1.55E-9
SQP	Pt	4.83E+0	1.18E-2	2.24E-3	4.84E+0	1.50E-2	9.80E-2	2.53E-3	-4.92E+0	3.81E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.07E+0	1.98E-4	2.40E-2	1.10E+0	2.52E-4	5.93E-3	3.84E-5	-7.97E-1	3.06E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.07E+0	1.98E-4	2.40E-2	1.10E+0	2.52E-4	5.93E-3	3.84E-5	-7.97E-1	3.06E-1
PENRE	MJ	4.50E+0	1.46E-2	1.44E-3	4.52E+0	1.86E-2	1.33E-1	1.05E-3	-2.04E+0	2.63E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.50E+0	1.46E-2	1.44E-3	4.52E+0	1.86E-2	1.33E-1	1.05E-3	-2.04E+0	2.63E+0
PET	MJ	5.57E+0	1.48E-2	2.55E-2	5.61E+0	1.89E-2	1.39E-1	1.08E-3	-2.84E+0	2.93E+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	1.65E-3	1.56E-6	1.46E-6	1.65E-3	1.98E-6	7.01E-5	1.22E-6	-7.93E-4	9.32E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.71E-6	3.53E-8	2.73E-13	1.75E-6	4.48E-8	2.15E-7	1.18E-9	-8.84E-7	1.12E-6
NHWD	kg	1.67E-2	8.55E-4	1.05E-6	1.76E-2	1.09E-3	6.23E-3	4.34E-3	-3.98E-3	2.52E-2
RWD	kg	4.93E-6	9.38E-8	1.10E-13	5.02E-6	1.19E-7	5.10E-7	6.44E-9	-1.56E-6	4.11E-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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