

Environmental Profile

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

Ecochain v3.5.80



Product: 3043879 - Wafix PP Bend 45° GY 40 S/SP
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	6.38E-2	5.37E-4	1.45E-4	6.45E-2	8.40E-4	8.17E-2	3.96E-4	-4.55E-2	1.02E-1
GWP-f	kg CO2 eq	1.13E-1	5.36E-4	1.46E-4	1.14E-1	8.40E-4	2.86E-2	3.96E-4	-5.24E-2	9.10E-2
GWP-b	kg CO2 eq	-4.92E-2	3.26E-7	-1.54E-6	-4.92E-2	5.10E-7	5.31E-2	3.45E-7	7.01E-3	1.09E-2
GWP-luluc	kg CO2 eq	1.25E-4	1.90E-7	1.49E-7	1.26E-4	2.97E-7	5.13E-6	6.64E-9	-8.59E-5	4.53E-5
ODP	kg CFC11 eq	7.11E-9	1.24E-10	8.26E-12	7.24E-9	1.94E-10	8.06E-10	9.92E-12	-3.03E-9	5.22E-9
AP	mol H+ eq	4.95E-4	3.05E-6	1.47E-6	4.99E-4	4.78E-6	3.30E-5	2.36E-7	-1.95E-4	3.42E-4
EP-fw	kg P eq	2.91E-6	4.41E-9	8.24E-9	2.92E-6	6.91E-9	1.52E-7	3.06E-10	-1.46E-6	1.62E-6
EP-m	kg N eq	9.84E-5	1.09E-6	1.55E-7	9.96E-5	1.71E-6	1.02E-5	1.55E-7	-4.10E-5	7.07E-5
EP-T	mol N eq	1.09E-3	1.20E-5	1.85E-6	1.11E-3	1.89E-5	1.12E-4	9.60E-7	-4.68E-4	7.70E-4
POCP	kg NMVOC eq	4.17E-4	3.44E-6	6.28E-7	4.21E-4	5.39E-6	3.47E-5	3.61E-7	-1.80E-4	2.81E-4
ADP-mm	kg Sb eq	4.56E-6	1.39E-8	1.97E-8	4.59E-6	2.17E-8	1.29E-7	2.37E-10	-4.26E-7	4.32E-6
ADP-f	MJ	3.22E+0	8.23E-3	1.36E-3	3.23E+0	1.29E-2	9.51E-2	7.24E-4	-1.45E+0	1.88E+0
WDP	m3 depriv.	6.70E-2	2.53E-5	5.22E-5	6.71E-2	3.96E-5	1.71E-3	3.31E-6	-3.48E-2	3.41E-2
PM	disease inc.	5.48E-9	4.84E-11	9.08E-12	5.54E-9	7.58E-11	5.25E-10	4.98E-12	-2.60E-9	3.54E-9
IR	kBq U-235 eq	3.35E-3	3.60E-5	1.02E-6	3.39E-3	5.63E-5	3.06E-4	3.36E-6	-1.38E-3	2.37E-3
ETP-fw	CTUe	2.24E+0	6.68E-3	1.21E-2	2.26E+0	1.05E-2	1.14E-1	6.06E-4	-9.78E-1	1.41E+0
HTP-c	CTUh	7.64E-11	2.38E-13	6.17E-13	7.73E-11	3.72E-13	1.34E-11	1.74E-14	-2.90E-11	6.21E-11
HTP-nc	CTUh	1.41E-9	7.97E-12	1.57E-11	1.44E-9	1.25E-11	1.62E-10	3.89E-13	-3.45E-10	1.27E-9
SQP	Pt	4.73E+0	7.04E-3	2.24E-3	4.74E+0	1.10E-2	7.44E-2	1.86E-3	-4.91E+0	-8.16E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.04E+0	1.18E-4	2.40E-2	1.07E+0	1.85E-4	4.48E-3	2.82E-5	-7.92E-1	2.79E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.04E+0	1.18E-4	2.40E-2	1.07E+0	1.85E-4	4.48E-3	2.82E-5	-7.92E-1	2.79E-1
PENRE	MJ	3.45E+0	8.74E-3	1.44E-3	3.46E+0	1.37E-2	1.01E-1	7.68E-4	-1.56E+0	2.01E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.45E+0	8.74E-3	1.44E-3	3.46E+0	1.37E-2	1.01E-1	7.68E-4	-1.56E+0	2.01E+0
PET	MJ	4.49E+0	8.86E-3	2.55E-2	4.52E+0	1.39E-2	1.06E-1	7.96E-4	-2.36E+0	2.29E+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	1.28E-3	9.31E-7	1.46E-6	1.28E-3	1.46E-6	5.31E-5	8.94E-7	-6.78E-4	6.56E-4

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.39E-6	2.10E-8	2.73E-13	1.41E-6	3.30E-8	1.68E-7	8.69E-10	-7.82E-7	8.31E-7
NHWD	kg	1.35E-2	5.10E-4	1.05E-6	1.40E-2	7.99E-4	4.78E-3	3.19E-3	-3.64E-3	1.92E-2
RWD	kg	3.60E-6	5.60E-8	1.10E-13	3.66E-6	8.77E-8	3.98E-7	4.73E-9	-1.37E-6	2.78E-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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