

Environmental Profile

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

Ecochain v3.5.80



Product: 3020638 - Wafix PP Branch 45° BK 40x40x40 S/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	1.11E-1	1.21E-3	1.45E-4	1.12E-1	1.97E-3	1.68E-1	9.26E-4	-1.08E-1	1.74E-1
GWP-f	kg CO2 eq	2.09E-1	1.21E-3	1.46E-4	2.10E-1	1.96E-3	6.65E-2	9.26E-4	-1.12E-1	1.68E-1
GWP-b	kg CO2 eq	-9.83E-2	7.35E-7	-1.54E-6	-9.83E-2	1.19E-6	1.01E-1	8.06E-7	3.27E-3	6.15E-3
GWP-luluc	kg CO2 eq	1.77E-4	4.28E-7	1.49E-7	1.77E-4	6.95E-7	1.15E-5	1.58E-8	-9.97E-5	8.98E-5
ODP	kg CFC11 eq	1.29E-8	2.79E-10	8.26E-12	1.32E-8	4.53E-10	1.65E-9	2.32E-11	-6.36E-9	9.00E-9
AP	mol H+ eq	8.88E-4	6.89E-6	1.47E-6	8.97E-4	1.12E-5	6.87E-5	5.54E-7	-3.72E-4	6.05E-4
EP-fw	kg P eq	4.78E-6	9.96E-9	8.24E-9	4.80E-6	1.62E-8	3.35E-7	7.24E-10	-2.09E-6	3.06E-6
EP-m	kg N eq	1.60E-4	2.47E-6	1.55E-7	1.63E-4	4.00E-6	2.08E-5	3.60E-7	-7.60E-5	1.12E-4
EP-T	mol N eq	1.80E-3	2.72E-5	1.85E-6	1.83E-3	4.41E-5	2.29E-4	2.25E-6	-8.61E-4	1.24E-3
POCP	kg NMVOC eq	7.49E-4	7.77E-6	6.28E-7	7.57E-4	1.26E-5	7.12E-5	8.44E-7	-3.52E-4	4.89E-4
ADP-mm	kg Sb eq	1.03E-5	3.13E-8	1.97E-8	1.04E-5	5.08E-8	2.66E-7	5.59E-10	-8.81E-7	9.82E-6
ADP-f	MJ	6.49E+0	1.86E-2	1.36E-3	6.51E+0	3.01E-2	2.07E-1	1.70E-3	-3.22E+0	3.52E+0
WDP	m3 depriv.	1.32E-1	5.70E-5	5.22E-5	1.32E-1	9.25E-5	3.87E-3	8.72E-6	-6.18E-2	7.46E-2
PM	disease inc.	9.56E-9	1.09E-10	9.08E-12	9.67E-9	1.77E-10	1.10E-9	1.17E-11	-4.40E-9	6.57E-9
IR	kBq U-235 eq	6.39E-3	8.12E-5	1.02E-6	6.47E-3	1.32E-4	6.45E-4	7.86E-6	-2.34E-3	4.91E-3
ETP-fw	CTUe	2.85E+0	1.51E-2	1.21E-2	2.88E+0	2.45E-2	2.37E-1	1.42E-3	-1.14E+0	2.00E+0
HTP-c	CTUh	1.13E-10	5.37E-13	6.17E-13	1.14E-10	8.71E-13	2.96E-11	4.15E-14	-5.40E-11	9.07E-11
HTP-nc	CTUh	2.19E-9	1.80E-11	1.57E-11	2.23E-9	2.92E-11	3.52E-10	9.14E-13	-8.48E-10	1.76E-9
SQP	Pt	8.89E+0	1.59E-2	2.24E-3	8.90E+0	2.58E-2	1.63E-1	4.35E-3	-7.86E+0	1.24E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.96E+0	2.67E-4	2.40E-2	1.99E+0	4.32E-4	9.91E-3	6.55E-5	-1.23E+0	7.67E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.96E+0	2.67E-4	2.40E-2	1.99E+0	4.32E-4	9.91E-3	6.55E-5	-1.23E+0	7.67E-1
PENRE	MJ	6.96E+0	1.97E-2	1.44E-3	6.98E+0	3.20E-2	2.20E-1	1.80E-3	-3.47E+0	3.76E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.96E+0	1.97E-2	1.44E-3	6.98E+0	3.20E-2	2.20E-1	1.80E-3	-3.47E+0	3.76E+0
PET	MJ	8.92E+0	2.00E-2	2.55E-2	8.96E+0	3.24E-2	2.30E-1	1.86E-3	-4.70E+0	4.53E+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	2.38E-3	2.10E-6	1.46E-6	2.39E-3	3.41E-6	1.18E-4	2.09E-6	-1.06E-3	1.45E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.05E-6	4.75E-8	2.73E-13	2.09E-6	7.71E-8	3.50E-7	2.04E-9	-1.38E-6	1.15E-6
NHWD	kg	1.59E-2	1.15E-3	1.05E-6	1.71E-2	1.87E-3	1.05E-2	7.47E-3	-6.63E-3	3.03E-2
RWD	kg	6.97E-6	1.26E-7	1.10E-13	7.10E-6	2.05E-7	8.27E-7	1.11E-8	-2.32E-6	5.82E-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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