

Environmental Profile

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

Ecochain v3.5.80



Product: 3043889 - Wafix PP Reducer GY 110x50 Short
 Unit: 1 piece
 Manufacturer: Wavin - PL -Buk - Extra products

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



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.

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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	2.71E-1	7.05E-4	1.45E-4	2.72E-1	3.96E-3	2.32E-1	1.86E-3	-1.97E-1	3.12E-1
GWP-f	kg CO2 eq	3.68E-1	7.04E-4	1.46E-4	3.69E-1	3.95E-3	1.25E-1	1.86E-3	-2.11E-1	2.89E-1
GWP-b	kg CO2 eq	-9.74E-2	4.28E-7	-1.54E-6	-9.74E-2	2.40E-6	1.07E-1	1.62E-6	1.38E-2	2.29E-2
GWP-luluc	kg CO2 eq	2.84E-4	2.49E-7	1.49E-7	2.84E-4	1.40E-6	2.30E-5	3.18E-8	-1.97E-4	1.12E-4
ODP	kg CFC11 eq	1.30E-8	1.62E-10	8.26E-12	1.31E-8	9.11E-10	3.28E-9	4.68E-11	-1.11E-8	6.24E-9
AP	mol H+ eq	1.46E-3	4.01E-6	1.47E-6	1.47E-3	2.25E-5	1.36E-4	1.12E-6	-6.90E-4	9.35E-4
EP-fw	kg P eq	7.67E-6	5.79E-9	8.24E-9	7.68E-6	3.25E-8	6.72E-7	1.46E-9	-4.15E-6	4.23E-6
EP-m	kg N eq	2.64E-4	1.43E-6	1.55E-7	2.66E-4	8.06E-6	4.08E-5	7.25E-7	-1.35E-4	1.81E-4
EP-T	mol N eq	2.93E-3	1.58E-5	1.85E-6	2.95E-3	8.88E-5	4.49E-4	4.53E-6	-1.52E-3	1.97E-3
POCP	kg NMVOC eq	1.23E-3	4.52E-6	6.28E-7	1.23E-3	2.54E-5	1.40E-4	1.70E-6	-6.27E-4	7.70E-4
ADP-mm	kg Sb eq	7.64E-6	1.82E-8	1.97E-8	7.68E-6	1.02E-7	5.35E-7	1.13E-9	-1.58E-6	6.73E-6
ADP-f	MJ	1.18E+1	1.08E-2	1.36E-3	1.18E+1	6.07E-2	4.12E-1	3.41E-3	-6.23E+0	6.04E+0
WDP	m3 depriv.	2.37E-1	3.32E-5	5.22E-5	2.37E-1	1.86E-4	7.76E-3	1.75E-5	-1.30E-1	1.15E-1
PM	disease inc.	1.45E-8	6.36E-11	9.08E-12	1.45E-8	3.57E-10	2.20E-9	2.35E-11	-7.70E-9	9.42E-9
IR	kBq U-235 eq	8.00E-3	4.72E-5	1.02E-6	8.05E-3	2.65E-4	1.28E-3	1.58E-5	-4.42E-3	5.20E-3
ETP-fw	CTUe	5.24E+0	8.78E-3	1.21E-2	5.26E+0	4.93E-2	4.79E-1	2.86E-3	-2.41E+0	3.39E+0
HTP-c	CTUh	1.88E-10	3.12E-13	6.17E-13	1.89E-10	1.75E-12	5.78E-11	8.36E-14	-7.66E-11	1.72E-10
HTP-nc	CTUh	3.94E-9	1.05E-11	1.57E-11	3.97E-9	5.87E-11	6.99E-10	1.84E-12	-1.33E-9	3.40E-9
SQP	Pt	9.53E+0	9.25E-3	2.24E-3	9.54E+0	5.19E-2	3.26E-1	8.76E-3	-9.99E+0	-6.75E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.07E+0	1.55E-4	2.40E-2	3.09E+0	8.71E-4	1.99E-2	1.32E-4	-1.64E+0	1.47E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.07E+0	1.55E-4	2.40E-2	3.09E+0	8.71E-4	1.99E-2	1.32E-4	-1.64E+0	1.47E+0
PENRE	MJ	1.26E+1	1.15E-2	1.44E-3	1.27E+1	6.44E-2	4.39E-1	3.62E-3	-6.71E+0	6.45E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.26E+1	1.15E-2	1.44E-3	1.27E+1	6.44E-2	4.39E-1	3.62E-3	-6.71E+0	6.45E+0
PET	MJ	1.57E+1	1.16E-2	2.55E-2	1.58E+1	6.53E-2	4.59E-1	3.75E-3	-8.35E+0	7.93E+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	3.94E-3	1.22E-6	1.46E-6	3.94E-3	6.87E-6	2.34E-4	4.21E-6	-2.25E-3	1.94E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.77E-6	2.76E-8	2.73E-13	2.79E-6	1.55E-7	6.97E-7	4.12E-9	-2.32E-6	1.33E-6
NHWD	kg	2.22E-2	6.70E-4	1.05E-6	2.29E-2	3.76E-3	2.05E-2	1.50E-2	-9.97E-3	5.23E-2
RWD	kg	7.60E-6	7.35E-8	1.10E-13	7.68E-6	4.13E-7	1.64E-6	2.23E-8	-4.23E-6	5.53E-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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