

Environmental Profile

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

Ecochain v3.5.64



Product: 3031671 - Wafix PP Pipe BK 90 L=3
 Unit: 1 piece
 Manufacturer: Wavin - SE - Eskilstuna

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 20-06-2022
 End of validity: 20-06-2027
 Verifier: Harry van Ewijk - SGS Search



Wafix PP is a versatile, uncomplicated solution for your indoor drain. You can install the impact-resistant pipes even in frost. Their excellent chemical resistance makes them ideal for embedment 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 - SE - Eskilstuna (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 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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	4.97E+0	1.91E-1	1.72E-1	5.33E+0	6.43E-2	1.86E+0	3.03E-2	-3.00E+0	4.29E+0
GWP-f	kg CO2 eq	4.95E+0	1.91E-1	1.25E-1	5.26E+0	6.42E-2	1.87E+0	3.03E-2	-2.99E+0	4.23E+0
GWP-b	kg CO2 eq	2.27E-2	5.05E-5	3.29E-2	5.56E-2	3.90E-5	-2.61E-3	2.64E-5	-1.02E-2	4.29E-2
GWP-luluc	kg CO2 eq	1.31E-3	8.38E-5	1.45E-2	1.59E-2	2.27E-5	3.61E-4	5.14E-7	-5.60E-4	1.58E-2
ODP	kg CFC11 eq	9.12E-8	4.10E-8	1.42E-8	1.46E-7	1.48E-8	4.71E-8	7.59E-10	-1.10E-7	9.89E-8
AP	mol H+ eq	1.76E-2	2.58E-3	1.06E-3	2.13E-2	3.66E-4	1.98E-3	1.81E-5	-8.45E-3	1.52E-2
EP-fw	kg P eq	7.50E-5	1.58E-6	2.31E-6	7.89E-5	5.28E-7	1.04E-5	2.36E-8	-3.35E-5	5.64E-5
EP-m	kg N eq	2.93E-3	7.24E-4	3.14E-4	3.96E-3	1.31E-4	5.75E-4	1.18E-5	-1.49E-3	3.19E-3
EP-T	mol N eq	3.30E-2	8.03E-3	3.44E-3	4.45E-2	1.44E-3	6.34E-3	7.35E-5	-1.65E-2	3.58E-2
POCP	kg NMVOC eq	1.53E-2	2.16E-3	9.56E-4	1.84E-2	4.12E-4	2.00E-3	2.76E-5	-7.67E-3	1.32E-2
ADP-mm	kg Sb eq	6.64E-5	3.81E-6	3.76E-6	7.39E-5	1.66E-6	7.86E-6	1.82E-8	-1.97E-5	6.37E-5
ADP-f	MJ	1.75E+2	2.75E+0	1.24E+0	1.79E+2	9.86E-1	6.28E+0	5.54E-2	-9.41E+1	9.26E+1
WDP	m3 depriv.	3.45E+0	8.25E-3	8.01E-1	4.26E+0	3.02E-3	1.23E-1	2.78E-4	-1.63E+0	2.76E+0
PM	disease inc.	1.56E-7	1.39E-8	1.79E-8	1.87E-7	5.80E-9	3.26E-8	3.81E-10	-7.12E-8	1.55E-7
IR	kBq U-235 eq	9.20E-2	1.16E-2	3.69E-3	1.07E-1	4.31E-3	1.89E-2	2.57E-4	-4.32E-2	8.76E-2
ETP-fw	CTUe	2.75E+1	2.27E+0	3.46E+0	3.32E+1	8.00E-1	7.10E+0	4.64E-2	-1.23E+1	2.89E+1
HTP-c	CTUh	1.52E-9	8.81E-11	1.37E-10	1.75E-9	2.85E-11	8.51E-10	1.35E-12	-4.98E-10	2.13E-9
HTP-nc	CTUh	3.60E-8	2.34E-9	3.73E-9	4.21E-8	9.54E-10	1.06E-8	2.98E-11	-9.89E-9	4.37E-8
SQP	Pt	6.11E+0	1.87E+0	1.63E-1	8.15E+0	8.43E-1	5.02E+0	1.42E-1	-2.55E+0	1.16E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.58E+0	3.01E-2	7.83E+0	1.04E+1	1.41E-2	3.10E-1	2.15E-3	-1.16E+0	9.61E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.58E+0	3.01E-2	7.83E+0	1.04E+1	1.41E-2	3.10E-1	2.15E-3	-1.16E+0	9.61E+0
PENRE	MJ	1.88E+2	2.92E+0	1.32E+0	1.92E+2	1.05E+0	6.69E+0	5.88E-2	-1.01E+2	9.88E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.88E+2	2.92E+0	1.32E+0	1.92E+2	1.05E+0	6.69E+0	5.88E-2	-1.01E+2	9.88E+1
PET	MJ	1.91E+2	2.95E+0	9.15E+0	2.03E+2	1.06E+0	7.00E+0	6.09E-2	-1.03E+2	1.08E+2
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	5.21E-2	2.83E-4	1.90E-2	7.14E-2	1.12E-4	3.61E-3	6.83E-5	-2.44E-2	5.07E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.33E-5	5.82E-6	1.89E-6	3.10E-5	2.52E-6	1.02E-5	6.68E-8	-2.41E-5	1.97E-5
NHWD	kg	2.03E-1	1.32E-1	5.80E-3	3.40E-1	6.11E-2	3.08E-1	2.44E-1	-7.44E-2	8.79E-1
RWD	kg	7.98E-5	1.83E-5	5.26E-6	1.03E-4	6.70E-6	2.40E-5	3.62E-7	-3.91E-5	9.54E-5
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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