

# Environmental Profile

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

Ecochain v3.5.64



Product: 3062134 - Wafix PP ML Pipe RD 110 SN4 L=3 S/CH  
 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	4.71E+0	5.08E-1	2.56E-1	5.47E+0	8.79E-2	2.03E+0	2.88E-2	-2.81E+0	4.80E+0
GWP-f	kg CO2 eq	4.69E+0	5.08E-1	1.85E-1	5.38E+0	8.78E-2	2.02E+0	2.88E-2	-2.80E+0	4.72E+0
GWP-b	kg CO2 eq	1.35E-2	2.02E-4	4.88E-2	6.25E-2	5.33E-5	6.17E-3	2.61E-5	-9.84E-3	5.89E-2
GWP-luluc	kg CO2 eq	7.03E-3	1.98E-4	2.16E-2	2.88E-2	3.11E-5	4.94E-4	5.75E-7	-5.47E-4	2.88E-2
ODP	kg CFC11 eq	1.02E-7	1.11E-7	2.10E-8	2.34E-7	2.02E-8	6.48E-8	9.30E-10	-1.04E-7	2.16E-7
AP	mol H+ eq	1.72E-2	4.22E-3	1.57E-3	2.30E-2	5.00E-4	2.66E-3	2.14E-5	-7.97E-3	1.82E-2
EP-fw	kg P eq	7.40E-5	4.83E-6	3.42E-6	8.23E-5	7.23E-7	1.43E-5	2.56E-8	-3.20E-5	6.53E-5
EP-m	kg N eq	2.91E-3	1.33E-3	4.65E-4	4.70E-3	1.79E-4	7.61E-4	1.27E-5	-1.41E-3	4.24E-3
EP-T	mol N eq	3.28E-2	1.47E-2	5.11E-3	5.25E-2	1.97E-3	8.37E-3	8.71E-5	-1.56E-2	4.73E-2
POCP	kg NMVOC eq	1.47E-2	4.07E-3	1.42E-3	2.01E-2	5.64E-4	2.66E-3	3.10E-5	-7.19E-3	1.62E-2
ADP-mm	kg Sb eq	8.91E-5	1.20E-5	5.58E-6	1.07E-4	2.27E-6	1.08E-5	2.11E-8	-1.85E-5	1.01E-4
ADP-f	MJ	1.64E+2	7.55E+0	1.84E+0	1.73E+2	1.35E+0	8.62E+0	6.65E-2	-8.81E+1	9.54E+1
WDP	m3 depriv.	3.30E+0	2.56E-2	1.19E+0	4.51E+0	4.14E-3	1.66E-1	3.21E-4	-1.55E+0	3.14E+0
PM	disease inc.	1.53E-7	4.28E-8	2.65E-8	2.22E-7	7.93E-9	4.47E-8	4.51E-10	-6.70E-8	2.08E-7
IR	kBq U-235 eq	9.24E-2	3.17E-2	5.48E-3	1.30E-1	5.89E-3	2.60E-2	3.04E-4	-4.19E-2	1.20E-1
ETP-fw	CTUe	3.09E+1	6.57E+0	5.14E+0	4.26E+1	1.09E+0	9.63E+0	5.15E-2	-1.26E+1	4.08E+1
HTP-c	CTUh	1.44E-9	2.26E-10	2.03E-10	1.87E-9	3.90E-11	1.10E-9	1.45E-12	-4.70E-10	2.54E-9
HTP-nc	CTUh	3.52E-8	7.07E-9	5.53E-9	4.78E-8	1.31E-9	1.40E-8	3.24E-11	-1.08E-8	5.23E-8
SQP	Pt	7.40E+0	6.11E+0	2.42E-1	1.37E+1	1.15E+0	6.95E+0	1.65E-1	-2.46E+0	1.96E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.68E+0	9.07E-2	1.16E+1	1.54E+1	1.93E-2	4.23E-1	2.23E-3	-1.12E+0	1.47E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.68E+0	9.07E-2	1.16E+1	1.54E+1	1.93E-2	4.23E-1	2.23E-3	-1.12E+0	1.47E+1
PENRE	MJ	1.76E+2	8.01E+0	1.96E+0	1.86E+2	1.43E+0	9.18E+0	7.05E-2	-9.49E+1	1.02E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.76E+2	8.01E+0	1.96E+0	1.86E+2	1.43E+0	9.18E+0	7.05E-2	-9.49E+1	1.02E+2
PET	MJ	1.80E+2	8.10E+0	1.36E+1	2.01E+2	1.45E+0	9.60E+0	7.28E-2	-9.61E+1	1.17E+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	5.12E-2	8.75E-4	2.82E-2	8.03E-2	1.53E-4	4.80E-3	8.13E-5	-2.34E-2	6.19E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.48E-5	1.81E-5	2.81E-6	4.58E-5	3.45E-6	1.39E-5	7.89E-8	-2.18E-5	4.14E-5
NHWD	kg	2.25E-1	4.42E-1	8.60E-3	6.75E-1	8.36E-2	4.20E-1	3.34E-1	-6.96E-2	1.44E+0
RWD	kg	8.22E-5	4.98E-5	7.80E-6	1.40E-4	9.17E-6	3.31E-5	4.38E-7	-3.78E-5	1.45E-4
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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