

# Environmental Profile

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

Ecochain v3.5.64



Product: 3061974 - Wafix PP Pipe GY 32 L=1 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 non-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	4.25E-1	1.55E-2	1.23E-2	4.53E-1	5.00E-3	1.53E-1	2.35E-3	-2.40E-1	3.73E-1
GWP-f	kg CO2 eq	4.23E-1	1.55E-2	8.93E-3	4.48E-1	4.99E-3	1.53E-1	2.36E-3	-2.39E-1	3.69E-1
GWP-b	kg CO2 eq	1.75E-3	4.47E-6	2.35E-3	4.10E-3	3.03E-6	-2.04E-4	2.05E-6	-7.85E-4	3.11E-3
GWP-luluc	kg CO2 eq	1.29E-4	6.70E-6	1.04E-3	1.17E-3	1.77E-6	2.82E-5	4.00E-8	-4.30E-5	1.16E-3
ODP	kg CFC11 eq	1.08E-8	3.35E-9	1.01E-9	1.52E-8	1.15E-9	3.70E-9	5.91E-11	-9.09E-9	1.10E-8
AP	mol H+ eq	1.57E-3	1.96E-4	7.56E-5	1.85E-3	2.85E-5	1.56E-4	1.41E-6	-6.65E-4	1.37E-3
EP-fw	kg P eq	7.08E-6	1.32E-7	1.65E-7	7.37E-6	4.11E-8	8.17E-7	1.84E-9	-2.66E-6	5.58E-6
EP-m	kg N eq	2.62E-4	5.59E-5	2.24E-5	3.40E-4	1.02E-5	4.55E-5	9.17E-7	-1.18E-4	2.79E-4
EP-T	mol N eq	2.97E-3	6.19E-4	2.46E-4	3.83E-3	1.12E-4	5.01E-4	5.72E-6	-1.31E-3	3.14E-3
POCP	kg NMVOC eq	1.33E-3	1.67E-4	6.83E-5	1.57E-3	3.21E-5	1.58E-4	2.15E-6	-6.08E-4	1.15E-3
ADP-mm	kg Sb eq	8.58E-6	3.20E-7	2.69E-7	9.17E-6	1.29E-7	6.17E-7	1.42E-9	-1.54E-6	8.37E-6
ADP-f	MJ	1.45E+1	2.25E-1	8.87E-2	1.49E+1	7.67E-2	4.91E-1	4.31E-3	-7.41E+0	8.02E+0
WDP	m3 depriv.	2.91E-1	6.92E-4	5.72E-2	3.48E-1	2.35E-4	9.58E-3	2.16E-5	-1.27E-1	2.31E-1
PM	disease inc.	1.41E-8	1.16E-9	1.28E-9	1.65E-8	4.51E-10	2.56E-9	2.96E-11	-5.62E-9	1.39E-8
IR	kBq U-235 eq	8.84E-3	9.49E-4	2.64E-4	1.01E-2	3.35E-4	1.48E-3	2.00E-5	-3.37E-3	8.52E-3
ETP-fw	CTUe	2.86E+0	1.88E-1	2.47E-1	3.29E+0	6.23E-2	5.58E-1	3.61E-3	-1.00E+0	2.92E+0
HTP-c	CTUh	1.58E-10	7.13E-12	9.77E-12	1.75E-10	2.22E-12	6.73E-11	1.05E-13	-3.93E-11	2.06E-10
HTP-nc	CTUh	3.54E-9	1.95E-10	2.66E-10	4.00E-9	7.42E-11	8.33E-10	2.32E-12	-5.69E-10	4.34E-9
SQP	Pt	6.44E-1	1.58E-1	1.17E-2	8.14E-1	6.56E-2	3.94E-1	1.11E-2	-2.02E-1	1.08E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.57E-1	2.51E-3	5.59E-1	9.19E-1	1.10E-3	2.43E-2	1.67E-4	-9.05E-2	8.54E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.57E-1	2.51E-3	5.59E-1	9.19E-1	1.10E-3	2.43E-2	1.67E-4	-9.05E-2	8.54E-1
PENRE	MJ	1.56E+1	2.39E-1	9.42E-2	1.59E+1	8.14E-2	5.23E-1	4.57E-3	-7.99E+0	8.56E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.56E+1	2.39E-1	9.42E-2	1.59E+1	8.14E-2	5.23E-1	4.57E-3	-7.99E+0	8.56E+0
PET	MJ	1.60E+1	2.42E-1	6.54E-1	1.69E+1	8.25E-2	5.47E-1	4.74E-3	-8.08E+0	9.41E+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	4.56E-3	2.37E-5	1.36E-3	5.94E-3	8.68E-6	2.83E-4	5.32E-6	-1.91E-3	4.33E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.53E-6	4.88E-7	1.35E-7	3.15E-6	1.96E-7	8.02E-7	5.19E-9	-2.10E-6	2.06E-6
NHWD	kg	2.18E-2	1.12E-2	4.14E-4	3.34E-2	4.75E-3	2.44E-2	1.90E-2	-5.93E-3	7.57E-2
RWD	kg	8.04E-6	1.50E-6	3.75E-7	9.91E-6	5.21E-7	1.88E-6	2.81E-8	-3.07E-6	9.28E-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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