

# Environmental Profile

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

Ecochain v3.5.64



Product: 3061977 - Wafix PP Pipe GY 32 L=3 PL/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	1.08E+0	4.09E-2	3.68E-2	1.16E+0	1.38E-2	4.11E-1	6.49E-3	-6.51E-1	9.40E-1
GWP-f	kg CO2 eq	1.08E+0	4.09E-2	2.67E-2	1.14E+0	1.38E-2	4.12E-1	6.49E-3	-6.49E-1	9.27E-1
GWP-b	kg CO2 eq	4.59E-3	1.09E-5	7.02E-3	1.16E-2	8.36E-6	-5.57E-4	5.65E-6	-2.20E-3	8.88E-3
GWP-luluc	kg CO2 eq	2.95E-4	1.80E-5	3.10E-3	3.41E-3	4.87E-6	7.76E-5	1.10E-7	-1.21E-4	3.38E-3
ODP	kg CFC11 eq	2.03E-8	8.80E-9	3.02E-9	3.22E-8	3.17E-9	1.01E-8	1.63E-10	-2.43E-8	2.13E-8
AP	mol H+ eq	3.85E-3	5.53E-4	2.26E-4	4.63E-3	7.84E-5	4.26E-4	3.88E-6	-1.82E-3	3.33E-3
EP-fw	kg P eq	1.66E-5	3.39E-7	4.92E-7	1.74E-5	1.13E-7	2.24E-6	5.06E-9	-7.19E-6	1.26E-5
EP-m	kg N eq	6.40E-4	1.55E-4	6.70E-5	8.62E-4	2.81E-5	1.24E-4	2.53E-6	-3.21E-4	6.96E-4
EP-T	mol N eq	7.22E-3	1.72E-3	7.35E-4	9.67E-3	3.09E-4	1.37E-3	1.58E-5	-3.56E-3	7.81E-3
POCP	kg NMVOC eq	3.33E-3	4.62E-4	2.04E-4	4.00E-3	8.84E-5	4.32E-4	5.92E-6	-1.65E-3	2.88E-3
ADP-mm	kg Sb eq	1.45E-5	8.18E-7	8.03E-7	1.61E-5	3.56E-7	1.69E-6	3.91E-9	-4.24E-6	1.39E-5
ADP-f	MJ	3.80E+1	5.90E-1	2.65E-1	3.88E+1	2.11E-1	1.35E+0	1.19E-2	-2.03E+1	2.01E+1
WDP	m3 depriv.	7.49E-1	1.77E-3	1.71E-1	9.21E-1	6.49E-4	2.64E-2	6.01E-5	-3.50E-1	5.98E-1
PM	disease inc.	3.39E-8	2.98E-9	3.81E-9	4.07E-8	1.24E-9	7.01E-9	8.17E-11	-1.53E-8	3.37E-8
IR	kBq U-235 eq	2.02E-2	2.49E-3	7.88E-4	2.35E-2	9.24E-4	4.07E-3	5.51E-5	-9.31E-3	1.92E-2
ETP-fw	CTUe	6.10E+0	4.87E-1	7.39E-1	7.33E+0	1.72E-1	1.53E+0	9.95E-3	-2.63E+0	6.40E+0
HTP-c	CTUh	3.21E-10	1.89E-11	2.92E-11	3.69E-10	6.11E-12	1.84E-10	2.90E-13	-1.07E-10	4.53E-10
HTP-nc	CTUh	7.74E-9	5.03E-10	7.96E-10	9.04E-9	2.05E-10	2.28E-9	6.40E-12	-2.24E-9	9.29E-9
SQP	Pt	1.37E+0	4.02E-1	3.49E-2	1.81E+0	1.81E-1	1.08E+0	3.05E-2	-5.49E-1	2.55E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.68E-1	6.45E-3	1.67E+0	2.25E+0	3.03E-3	6.65E-2	4.60E-4	-2.50E-1	2.07E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.68E-1	6.45E-3	1.67E+0	2.25E+0	3.03E-3	6.65E-2	4.60E-4	-2.50E-1	2.07E+0
PENRE	MJ	4.07E+1	6.26E-1	2.82E-1	4.17E+1	2.24E-1	1.44E+0	1.26E-2	-2.19E+1	2.15E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.07E+1	6.26E-1	2.82E-1	4.17E+1	2.24E-1	1.44E+0	1.26E-2	-2.19E+1	2.15E+1
PET	MJ	4.13E+1	6.33E-1	1.95E+0	4.39E+1	2.27E-1	1.50E+0	1.31E-2	-2.21E+1	2.35E+1
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	1.14E-2	6.08E-5	4.06E-3	1.55E-2	2.39E-5	7.77E-4	1.46E-5	-5.24E-3	1.11E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.22E-6	1.25E-6	4.04E-7	6.87E-6	5.40E-7	2.20E-6	1.43E-8	-5.25E-6	4.38E-6
NHWD	kg	4.44E-2	2.83E-2	1.24E-3	7.39E-2	1.31E-2	6.66E-2	5.24E-2	-1.59E-2	1.90E-1
RWD	kg	1.75E-5	3.94E-6	1.12E-6	2.26E-5	1.44E-6	5.16E-6	7.76E-8	-8.43E-6	2.08E-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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