

# Environmental Profile

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

Ecochain v3.5.64



Product: 3061939 - Wafix PP Pipe GY 40 L=0,5 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	2.85E-1	1.10E-2	7.85E-3	3.04E-1	3.47E-3	1.01E-1	1.63E-3	-1.61E-1	2.49E-1
GWP-f	kg CO2 eq	2.84E-1	1.10E-2	5.69E-3	3.01E-1	3.47E-3	1.01E-1	1.63E-3	-1.60E-1	2.46E-1
GWP-b	kg CO2 eq	1.31E-3	3.36E-6	1.50E-3	2.81E-3	2.11E-6	-1.39E-4	1.42E-6	-5.63E-4	2.11E-3
GWP-luluc	kg CO2 eq	8.21E-5	4.69E-6	6.62E-4	7.49E-4	1.23E-6	1.95E-5	2.80E-8	-3.11E-5	7.38E-4
ODP	kg CFC11 eq	8.14E-9	2.39E-9	6.45E-10	1.12E-8	7.99E-10	2.53E-9	4.10E-11	-5.91E-9	8.63E-9
AP	mol H+ eq	1.07E-3	1.32E-4	4.82E-5	1.25E-3	1.98E-5	1.06E-4	9.79E-7	-4.52E-4	9.22E-4
EP-fw	kg P eq	4.47E-6	9.54E-8	1.05E-7	4.68E-6	2.85E-8	5.61E-7	1.28E-9	-1.77E-6	3.50E-6
EP-m	kg N eq	1.76E-4	3.81E-5	1.43E-5	2.29E-4	7.07E-6	3.09E-5	6.36E-7	-7.97E-5	1.88E-4
EP-T	mol N eq	2.01E-3	4.22E-4	1.57E-4	2.58E-3	7.79E-5	3.40E-4	3.97E-6	-8.83E-4	2.12E-3
POCP	kg NMVOC eq	8.97E-4	1.14E-4	4.36E-5	1.05E-3	2.23E-5	1.08E-4	1.49E-6	-4.08E-4	7.78E-4
ADP-mm	kg Sb eq	7.86E-6	2.32E-7	1.71E-7	8.26E-6	8.97E-8	4.21E-7	9.88E-10	-1.07E-6	7.71E-6
ADP-f	MJ	9.87E+0	1.61E-1	5.66E-2	1.01E+1	5.32E-2	3.38E-1	2.99E-3	-5.07E+0	5.41E+0
WDP	m3 depriv.	1.99E-1	5.01E-4	3.65E-2	2.36E-1	1.63E-4	6.62E-3	1.56E-5	-8.79E-2	1.55E-1
PM	disease inc.	9.50E-9	8.40E-10	8.14E-10	1.12E-8	3.13E-10	1.75E-9	2.06E-11	-3.78E-9	9.46E-9
IR	kBq U-235 eq	6.02E-3	6.77E-4	1.68E-4	6.87E-3	2.33E-4	1.02E-3	1.39E-5	-2.35E-3	5.78E-3
ETP-fw	CTUe	1.84E+0	1.35E-1	1.58E-1	2.14E+0	4.32E-2	3.81E-1	2.51E-3	-6.26E-1	1.94E+0
HTP-c	CTUh	7.52E-11	5.04E-12	6.23E-12	8.65E-11	1.54E-12	4.63E-11	7.36E-14	-2.68E-11	1.08E-10
HTP-nc	CTUh	2.08E-9	1.41E-10	1.70E-10	2.39E-9	5.15E-11	5.68E-10	1.62E-12	-7.59E-10	2.25E-9
SQP	Pt	4.48E-1	1.16E-1	7.44E-3	5.71E-1	4.55E-2	2.70E-1	7.68E-3	-1.36E-1	7.58E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.07E-1	1.81E-3	3.57E-1	6.65E-1	7.64E-4	1.67E-2	1.16E-4	-6.30E-2	6.20E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.07E-1	1.81E-3	3.57E-1	6.65E-1	7.64E-4	1.67E-2	1.16E-4	-6.30E-2	6.20E-1
PENRE	MJ	1.06E+1	1.71E-1	6.01E-2	1.08E+1	5.65E-2	3.60E-1	3.18E-3	-5.46E+0	5.78E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.06E+1	1.71E-1	6.01E-2	1.08E+1	5.65E-2	3.60E-1	3.18E-3	-5.46E+0	5.78E+0
PET	MJ	1.09E+1	1.72E-1	4.17E-1	1.15E+1	5.73E-2	3.77E-1	3.29E-3	-5.53E+0	6.40E+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	3.10E-3	1.72E-5	8.66E-4	3.99E-3	6.02E-6	1.95E-4	3.69E-6	-1.31E-3	2.88E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.49E-6	3.54E-7	8.62E-8	1.93E-6	1.36E-7	5.49E-7	3.61E-9	-1.16E-6	1.46E-6
NHWD	kg	1.43E-2	8.20E-3	2.64E-4	2.27E-2	3.30E-3	1.66E-2	1.32E-2	-3.90E-3	5.19E-2
RWD	kg	5.70E-6	1.07E-6	2.39E-7	7.01E-6	3.62E-7	1.29E-6	1.95E-8	-2.12E-6	6.56E-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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