

# Environmental Profile

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

Ecochain v3.5.64



Product: 3061956 - Wafix PP Pipe GY 75 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

This document and supporting material contain confidential and proprietary business information of Wavin - SE - Eskilstuna. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - SE - Eskilstuna.

# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.46E+0	1.32E-1	1.13E-1	3.71E+0	4.36E-2	1.31E+0	2.05E-2	-2.07E+0	3.02E+0
GWP-f	kg CO2 eq	3.45E+0	1.32E-1	8.21E-2	3.66E+0	4.36E-2	1.31E+0	2.05E-2	-2.06E+0	2.98E+0
GWP-b	kg CO2 eq	1.47E-2	3.62E-5	2.16E-2	3.64E-2	2.64E-5	-1.77E-3	1.79E-5	-6.96E-3	2.77E-2
GWP-luluc	kg CO2 eq	9.61E-4	5.75E-5	9.55E-3	1.06E-2	1.54E-5	2.45E-4	3.49E-7	-3.83E-4	1.04E-2
ODP	kg CFC11 eq	6.91E-8	2.84E-8	9.30E-9	1.07E-7	1.00E-8	3.21E-8	5.15E-10	-7.79E-8	7.16E-8
AP	mol H+ eq	1.24E-2	1.73E-3	6.96E-4	1.48E-2	2.48E-4	1.35E-3	1.23E-5	-5.75E-3	1.07E-2
EP-fw	kg P eq	5.36E-5	1.11E-6	1.52E-6	5.63E-5	3.58E-7	7.09E-6	1.60E-8	-2.27E-5	4.10E-5
EP-m	kg N eq	2.07E-3	4.90E-4	2.06E-4	2.76E-3	8.88E-5	3.93E-4	8.00E-6	-1.02E-3	2.23E-3
EP-T	mol N eq	2.33E-2	5.43E-3	2.26E-3	3.10E-2	9.78E-4	4.33E-3	4.99E-5	-1.13E-2	2.51E-2
POCP	kg NMVOC eq	1.07E-2	1.46E-3	6.28E-4	1.28E-2	2.80E-4	1.37E-3	1.87E-5	-5.22E-3	9.25E-3
ADP-mm	kg Sb eq	5.04E-5	2.67E-6	2.47E-6	5.56E-5	1.13E-6	5.34E-6	1.24E-8	-1.34E-5	4.86E-5
ADP-f	MJ	1.21E+2	1.91E+0	8.16E-1	1.24E+2	6.69E-1	4.26E+0	3.76E-2	-6.43E+1	6.45E+1
WDP	m3 depriv.	2.39E+0	5.78E-3	5.26E-1	2.92E+0	2.05E-3	8.34E-2	1.88E-4	-1.11E+0	1.90E+0
PM	disease inc.	1.09E-7	9.70E-9	1.17E-8	1.31E-7	3.93E-9	2.22E-8	2.58E-10	-4.83E-8	1.09E-7
IR	kBq U-235 eq	6.60E-2	8.04E-3	2.43E-3	7.65E-2	2.92E-3	1.29E-2	1.74E-4	-2.95E-2	6.30E-2
ETP-fw	CTUe	2.00E+1	1.58E+0	2.28E+0	2.39E+1	5.43E-1	4.83E+0	3.15E-2	-8.31E+0	2.10E+1
HTP-c	CTUh	1.03E-9	6.08E-11	8.99E-11	1.18E-9	1.93E-11	5.84E-10	9.18E-13	-3.40E-10	1.44E-9
HTP-nc	CTUh	2.50E-8	1.64E-9	2.45E-9	2.91E-8	6.47E-10	7.21E-9	2.02E-11	-7.23E-9	2.97E-8
SQP	Pt	4.57E+0	1.32E+0	1.07E-1	6.00E+0	5.72E-1	3.41E+0	9.65E-2	-1.74E+0	8.34E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.26E+0	2.10E-2	5.15E+0	7.43E+0	9.59E-3	2.10E-1	1.46E-3	-7.91E-1	6.86E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.26E+0	2.10E-2	5.15E+0	7.43E+0	9.59E-3	2.10E-1	1.46E-3	-7.91E-1	6.86E+0
PENRE	MJ	1.30E+2	2.02E+0	8.67E-1	1.33E+2	7.10E-1	4.54E+0	3.99E-2	-6.93E+1	6.88E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.30E+2	2.02E+0	8.67E-1	1.33E+2	7.10E-1	4.54E+0	3.99E-2	-6.93E+1	6.88E+1
PET	MJ	1.32E+2	2.05E+0	6.01E+0	1.40E+2	7.19E-1	4.75E+0	4.13E-2	-7.01E+1	7.57E+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	3.64E-2	1.98E-4	1.25E-2	4.91E-2	7.57E-5	2.46E-3	4.64E-5	-1.66E-2	3.51E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.71E-5	4.08E-6	1.24E-6	2.24E-5	1.71E-6	6.95E-6	4.53E-8	-1.67E-5	1.44E-5
NHWD	kg	1.48E-1	9.28E-2	3.81E-3	2.45E-1	4.14E-2	2.11E-1	1.66E-1	-5.04E-2	6.13E-1
RWD	kg	5.79E-5	1.27E-5	3.45E-6	7.41E-5	4.55E-6	1.63E-5	2.45E-7	-2.67E-5	6.85E-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



Ecochain Technologies BV  
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands  
<https://www.ecochain.com>  
+31 20 3035 777