Environmental Profile

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

Ecochain v3.5.64

Product:	4055375 - Wafix PP Pipe L/GY 50 L=1
Unit:	1 piece
Manufacturer:	Wavin - SE - Eskilstuna

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.

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

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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.66E-1	2.51E-2	1.96E-2	7.10E-1	8.03E-3	2.46E-1	3.78E-3	-3.85E-1	5.83E-1
GWP-f	kg CO2 eq	6.63E-1	2.50E-2	1.42E-2	7.02E-1	8.02E-3	2.46E-1	3.78E-3	-3.84E-1	5.76E-1
GWP-b	kg CO2 eq	2.79E-3	7.24E-6	3.74E-3	6.54E-3	4.87E-6	-3.29E-4	3.29E-6	-1.26E-3	4.96E-3
GWP-luluc	kg CO2 eq	1.98E-4	1.08E-5	1.65E-3	1.86E-3	2.84E-6	4.53E-5	6.42E-8	-6.91E-5	1.84E-3
ODP	kg CFC11 eq	1.60E-8	5.40E-9	1.61E-9	2.30E-8	1.85E-9	5.94E-9	9.48E-11	-1.46E-8	1.62E-8
AP	mol H+ eq	2.44E-3	3.15E-4	1.20E-4	2.87E-3	4.57E-5	2.51E-4	2.26E-6	-1.07E-3	2.10E-3
EP-fw	kg P eq	1.10E-5	2.13E-7	2.62E-7	1.14E-5	6.60E-8	1.31E-6	2.95E-9	-4.26E-6	8.56E-6
EP-m	kg N eq	4.08E-4	8.97E-5	3.57E-5	5.33E-4	1.63E-5	7.30E-5	1.47E-6	-1.90E-4	4.34E-4
EP-T	mol N eq	4.60E-3	9.94E-4	3.91E-4	5.99E-3	1.80E-4	8.04E-4	9.18E-6	-2.10E-3	4.88E-3
POCP	kg NMVOC eq	2.09E-3	2.68E-4	1.09E-4	2.46E-3	5.15E-5	2.54E-4	3.45E-6	-9.76E-4	1.80E-3
ADP-mm	kg Sb eq	1.22E-5	5.17E-7	4.28E-7	1.32E-5	2.07E-7	9.90E-7	2.28E-9	-2.47E-6	1.19E-5
ADP-f	MJ	2.29E+1	3.63E-1	1.41E-1	2.34E+1	1.23E-1	7.88E-1	6.92E-3	-1.19E+1	1.24E+1
WDP	m3 depriv.	4.54E-1	1.12E-3	9.10E-2	5.46E-1	3.78E-4	1.54E-2	3.46E-5	-2.05E-1	3.58E-1
PM	disease inc.	2.18E-8	1.87E-9	2.03E-9	2.57E-8	7.24E-10	4.11E-9	4.76E-11	-9.02E-9	2.15E-8
IR	kBq U-235 eq	1.36E-2	1.53E-3	4.20E-4	1.56E-2	5.38E-4	2.38E-3	3.21E-5	-5.41E-3	1.31E-2
ETP-fw	CTUe	4.33E+0	3.03E-1	3.94E-1	5.02E+0	1.00E-1	8.96E-1	5.79E-3	-1.61E+0	4.42E+0
HTP-c	CTUh	2.45E-10	1.15E-11	1.55E-11	2.72E-10	3.56E-12	1.08E-10	1.69E-13	-6.31E-11	3.21E-10
HTP-nc	CTUh	5.46E-9	3.15E-10	4.24E-10	6.19E-9	1.19E-10	1.34E-9	3.73E-12	-9.23E-10	6.73E-9
SQP	Pt	9.79E-1	2.56E-1	1.86E-2	1.25E+0	1.05E-1	6.32E-1	1.78E-2	-3.25E-1	1.68E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.70E-1	4.05E-3	8.91E-1	1.46E+0	1.77E-3	3.89E-2	2.68E-4	-1.45E-1	1.36E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.70E-1	4.05E-3	8.91E-1	1.46E+0	1.77E-3	3.89E-2	2.68E-4	-1.45E-1	1.36E+0
PENRE	MJ	2.46E+1	3.86E-1	1.50E-1	2.51E+1	1.31E-1	8.40E-1	7.34E-3	-1.28E+1	1.33E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.46E+1	3.86E-1	1.50E-1	2.51E+1	1.31E-1	8.40E-1	7.34E-3	-1.28E+1	1.33E+1
PET	MJ	2.52E+1	3.90E-1	1.04E+0	2.66E+1	1.32E-1	8.79E-1	7.61E-3	-1.30E+1	1.46E+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	7.07E-3	3.83E-5	2.16E-3	9.27E-3	1.39E-5	4.55E-4	8.54E-6	-3.07E-3	6.68E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.82E-6	7.88E-7	2.15E-7	4.83E-6	3.15E-7	1.29E-6	8.34E-9	-3.37E-6	3.07E-6
NHWD	kg	3.30E-2	1.81E-2	6.59E-4	5.18E-2	7.63E-3	3.92E-2	3.05E-2	-9.51E-3	1.20E-1
RWD	kg	1.23E-5	2.42E-6	5.97E-7	1.53E-5	8.37E-7	3.02E-6	4.52E-8	-4.93E-6	1.43E-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