Environmental Profile

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

Ecochain v3.5.64

Product:	4055378 - Wafix PP Pipe L/GY 50 L=3 w/socket
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	1.79E+0	6.83E-2	5.88E-2	1.92E+0	2.26E-2	6.75E-1	1.07E-2	-1.07E+0	1.56E+0
GWP-f	kg CO2 eq	1.79E+0	6.83E-2	4.26E-2	1.90E+0	2.26E-2	6.76E-1	1.07E-2	-1.07E+0	1.54E+0
GWP-b	kg CO2 eq	7.75E-3	1.87E-5	1.12E-2	1.90E-2	1.37E-5	-9.17E-4	9.28E-6	-3.61E-3	1.45E-2
GWP-luluc	kg CO2 eq	4.96E-4	2.98E-5	4.96E-3	5.48E-3	8.00E-6	1.27E-4	1.81E-7	-1.99E-4	5.42E-3
ODP	kg CFC11 eq	3.64E-8	1.47E-8	4.83E-9	5.59E-8	5.21E-9	1.66E-8	2.67E-10	-4.00E-8	3.80E-8
AP	mol H+ eq	6.44E-3	9.01E-4	3.61E-4	7.70E-3	1.29E-4	7.00E-4	6.37E-6	-2.98E-3	5.56E-3
EP-fw	kg P eq	2.78E-5	5.72E-7	7.87E-7	2.91E-5	1.86E-7	3.68E-6	8.31E-9	-1.18E-5	2.12E-5
EP-m	kg N eq	1.07E-3	2.54E-4	1.07E-4	1.43E-3	4.61E-5	2.04E-4	4.15E-6	-5.27E-4	1.16E-3
EP-T	mol N eq	1.21E-2	2.82E-3	1.17E-3	1.61E-2	5.08E-4	2.24E-3	2.59E-5	-5.84E-3	1.30E-2
POCP	kg NMVOC eq	5.55E-3	7.57E-4	3.26E-4	6.64E-3	1.45E-4	7.09E-4	9.71E-6	-2.71E-3	4.79E-3
ADP-mm	kg Sb eq	2.73E-5	1.38E-6	1.28E-6	3.00E-5	5.85E-7	2.77E-6	6.42E-9	-6.96E-6	2.64E-5
ADP-f	MJ	6.28E+1	9.87E-1	4.24E-1	6.42E+1	3.47E-1	2.21E+0	1.95E-2	-3.33E+1	3.35E+1
WDP	m3 depriv.	1.24E+0	2.99E-3	2.73E-1	1.52E+0	1.06E-3	4.33E-2	9.79E-5	-5.75E-1	9.86E-1
PM	disease inc.	5.68E-8	5.02E-9	6.09E-9	6.79E-8	2.04E-9	1.15E-8	1.34E-10	-2.50E-8	5.65E-8
IR	kBq U-235 eq	3.43E-2	4.16E-3	1.26E-3	3.98E-2	1.52E-3	6.68E-3	9.05E-5	-1.53E-2	3.27E-2
ETP-fw	CTUe	1.04E+1	8.18E-1	1.18E+0	1.24E+1	2.82E-1	2.50E+0	1.63E-2	-4.31E+0	1.09E+1
HTP-c	CTUh	5.38E-10	3.15E-11	4.66E-11	6.16E-10	1.00E-11	3.02E-10	4.76E-13	-1.76E-10	7.53E-10
HTP-nc	CTUh	1.30E-8	8.47E-10	1.27E-9	1.52E-8	3.36E-10	3.74E-9	1.05E-11	-3.71E-9	1.55E-8
SQP	Pt	2.37E+0	6.81E-1	5.57E-2	3.10E+0	2.97E-1	1.77E+0	5.01E-2	-9.02E-1	4.32E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.15E+0	1.09E-2	2.67E+0	3.83E+0	4.98E-3	1.09E-1	7.56E-4	-4.10E-1	3.54E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.15E+0	1.09E-2	2.67E+0	3.83E+0	4.98E-3	1.09E-1	7.56E-4	-4.10E-1	3.54E+0
PENRE	MJ	6.74E+1	1.05E+0	4.50E-1	6.89E+1	3.68E-1	2.36E+0	2.07E-2	-3.59E+1	3.58E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.74E+1	1.05E+0	4.50E-1	6.89E+1	3.68E-1	2.36E+0	2.07E-2	-3.59E+1	3.58E+1
PET	MJ	6.86E+1	1.06E+0	3.12E+0	7.28E+1	3.73E-1	2.47E+0	2.15E-2	-3.63E+1	3.93E+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	1.89E-2	1.03E-4	6.49E-3	2.55E-2	3.93E-5	1.28E-3	2.41E-5	-8.61E-3	1.82E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.85E-6	2.11E-6	6.45E-7	1.16E-5	8.87E-7	3.60E-6	2.35E-8	-8.60E-6	7.53E-6
NHWD	kg	7.71E-2	4.79E-2	1.98E-3	1.27E-1	2.15E-2	1.09E-1	8.60E-2	-2.62E-2	3.18E-1
RWD	kg	3.02E-5	6.58E-6	1.79E-6	3.86E-5	2.36E-6	8.46E-6	1.27E-7	-1.38E-5	3.57E-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