Environmental Profile

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

Ecochain v3.5.64

Product:	3062124 - Wafix PP Pipe BR 160 SN8 L=6
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	3.15E+1	3.06E+0	1.13E+0	3.57E+1	4.09E-1	1.19E+1	1.93E-1	-1.91E+1	2.91E+1
GWP-f	kg CO2 eq	3.13E+1	3.06E+0	8.19E-1	3.52E+1	4.09E-1	1.19E+1	1.93E-1	-1.90E+1	2.87E+1
GWP-b	kg CO2 eq	1.46E-1	1.39E-3	2.16E-1	3.63E-1	2.48E-4	-1.65E-2	1.68E-4	-6.60E-2	2.81E-1
GWP-luluc	kg CO2 eq	8.17E-3	1.13E-3	9.52E-2	1.05E-1	1.45E-4	2.30E-3	3.28E-6	-3.64E-3	1.03E-1
ODP	kg CFC11 eq	5.83E-7	6.75E-7	9.28E-8	1.35E-6	9.43E-8	2.99E-7	4.84E-9	-7.00E-7	1.05E-6
AP	mol H+ eq	1.12E-1	1.86E-2	6.94E-3	1.37E-1	2.33E-3	1.26E-2	1.15E-4	-5.35E-2	9.86E-2
EP-fw	kg P eq	4.63E-4	3.07E-5	1.51E-5	5.09E-4	3.37E-6	6.63E-5	1.50E-7	-2.11E-4	3.68E-4
EP-m	kg N eq	1.85E-2	6.44E-3	2.06E-3	2.70E-2	8.34E-4	3.65E-3	7.51E-5	-9.44E-3	2.21E-2
EP-T	mol N eq	2.09E-1	7.10E-2	2.26E-2	3.03E-1	9.19E-3	4.02E-2	4.68E-4	-1.05E-1	2.48E-1
POCP	kg NMVOC eq	9.67E-2	2.02E-2	6.27E-3	1.23E-1	2.63E-3	1.27E-2	1.76E-4	-4.84E-2	9.04E-2
ADP-mm	kg Sb eq	4.54E-4	7.69E-5	2.47E-5	5.56E-4	1.06E-5	4.98E-5	1.16E-7	-1.26E-4	4.90E-4
ADP-f	MJ	1.11E+3	4.61E+1	8.14E+0	1.17E+3	6.28E+0	3.99E+1	3.53E-1	-5.99E+2	6.17E+2
WDP	m3 depriv.	2.20E+1	1.64E-1	5.25E+0	2.74E+1	1.93E-2	7.82E-1	1.76E-3	-1.04E+1	1.78E+1
PM	disease inc.	9.80E-7	2.73E-7	1.17E-7	1.37E-6	3.69E-8	2.07E-7	2.43E-9	-4.48E-7	1.17E-6
IR	kBq U-235 eq	5.78E-1	1.93E-1	2.42E-2	7.95E-1	2.74E-2	1.20E-1	1.64E-3	-2.77E-1	6.68E-1
ETP-fw	CTUe	1.69E+2	4.10E+1	2.27E+1	2.32E+2	5.10E+0	4.50E+1	2.95E-1	-7.54E+1	2.07E+2
HTP-c	CTUh	8.04E-9	1.34E-9	8.96E-10	1.03E-8	1.81E-10	5.42E-9	8.61E-12	-3.16E-9	1.27E-8
HTP-nc	CTUh	2.11E-7	4.47E-8	2.44E-8	2.80E-7	6.08E-9	6.70E-8	1.90E-10	-8.06E-8	2.73E-7
SQP	Pt	3.93E+1	3.97E+1	1.07E+0	8.01E+1	5.37E+0	3.19E+1	9.06E-1	-1.61E+1	1.02E+2

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.92E+1	5.74E-1	5.13E+1	7.11E+1	9.01E-2	1.97E+0	1.37E-2	-7.42E+0	6.57E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.92E+1	5.74E-1	5.13E+1	7.11E+1	9.01E-2	1.97E+0	1.37E-2	-7.42E+0	6.57E+1
PENRE	MJ	1.20E+3	4.89E+1	8.64E+0	1.25E+3	6.67E+0	4.25E+1	3.75E-1	-6.45E+2	6.58E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.20E+3	4.89E+1	8.64E+0	1.25E+3	6.67E+0	4.25E+1	3.75E-1	-6.45E+2	6.58E+2
PET	MJ	1.22E+3	4.95E+1	6.00E+1	1.33E+3	6.76E+0	4.45E+1	3.88E-1	-6.53E+2	7.24E+2
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	3.30E-1	5.58E-3	1.25E-1	4.60E-1	7.11E-4	2.30E-2	4.35E-4	-1.55E-1	3.29E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.39E-4	1.16E-4	1.24E-5	2.67E-4	1.61E-5	6.48E-5	4.25E-7	-1.43E-4	2.06E-4
NHWD	kg	1.26E+0	2.90E+0	3.80E-2	4.19E+0	3.89E-1	1.96E+0	1.56E+0	-4.65E-1	7.63E+0
RWD	kg	5.05E-4	3.03E-4	3.44E-5	8.42E-4	4.27E-5	1.52E-4	2.31E-6	-2.50E-4	7.90E-4
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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