Environmental Profile

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

Ecochain v3.5.64

Product:	3062147 - Wafix PP ML Pipe RD 160 SN8 L=6 S/CH
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	2.49E+1	2.75E+0	1.23E+0	2.89E+1	4.73E-1	1.08E+1	1.53E-1	-1.50E+1	2.53E+1
GWP-f	kg CO2 eq	2.48E+1	2.75E+0	8.93E-1	2.84E+1	4.73E-1	1.08E+1	1.53E-1	-1.49E+1	2.50E+1
GWP-b	kg CO2 eq	1.18E-1	1.09E-3	2.35E-1	3.54E-1	2.87E-4	-1.65E-2	1.39E-4	-5.27E-2	2.85E-1
GWP-luluc	kg CO2 eq	6.82E-3	1.07E-3	1.04E-1	1.12E-1	1.67E-4	2.66E-3	3.07E-6	-2.94E-3	1.12E-1
ODP	kg CFC11 eq	4.97E-7	6.02E-7	1.01E-7	1.20E-6	1.09E-7	3.48E-7	5.00E-9	-5.52E-7	1.11E-6
AP	mol H+ eq	9.00E-2	2.29E-2	7.57E-3	1.21E-1	2.69E-3	1.43E-2	1.15E-4	-4.24E-2	9.52E-2
EP-fw	kg P eq	3.82E-4	2.61E-5	1.65E-5	4.24E-4	3.89E-6	7.67E-5	1.37E-7	-1.70E-4	3.35E-4
EP-m	kg N eq	1.49E-2	7.21E-3	2.24E-3	2.44E-2	9.64E-4	4.09E-3	6.78E-5	-7.50E-3	2.20E-2
EP-T	mol N eq	1.70E-1	7.97E-2	2.46E-2	2.74E-1	1.06E-2	4.50E-2	4.67E-4	-8.32E-2	2.47E-1
POCP	kg NMVOC eq	7.70E-2	2.21E-2	6.83E-3	1.06E-1	3.04E-3	1.43E-2	1.66E-4	-3.82E-2	8.52E-2
ADP-mm	kg Sb eq	4.18E-4	6.48E-5	2.69E-5	5.10E-4	1.22E-5	5.79E-5	1.13E-7	-9.87E-5	4.81E-4
ADP-f	MJ	8.73E+2	4.09E+1	8.88E+0	9.22E+2	7.26E+0	4.64E+1	3.57E-1	-4.70E+2	5.07E+2
WDP	m3 depriv.	1.75E+1	1.39E-1	5.72E+0	2.33E+1	2.23E-2	8.92E-1	1.70E-3	-8.24E+0	1.60E+1
PM	disease inc.	7.93E-7	2.31E-7	1.28E-7	1.15E-6	4.27E-8	2.40E-7	2.42E-9	-3.56E-7	1.08E-6
IR	kBq U-235 eq	4.76E-1	1.72E-1	2.64E-2	6.74E-1	3.17E-2	1.40E-1	1.63E-3	-2.24E-1	6.24E-1
ETP-fw	CTUe	1.55E+2	3.56E+1	2.47E+1	2.15E+2	5.90E+0	5.18E+1	2.76E-1	-6.64E+1	2.07E+2
HTP-c	CTUh	6.90E-9	1.22E-9	9.77E-10	9.10E-9	2.10E-10	5.90E-9	7.73E-12	-2.51E-9	1.27E-8
HTP-nc	CTUh	1.75E-7	3.83E-8	2.66E-8	2.40E-7	7.03E-9	7.52E-8	1.73E-10	-6.20E-8	2.61E-7
SQP	Pt	3.47E+1	3.30E+1	1.17E+0	6.89E+1	6.21E+0	3.74E+1	8.86E-1	-1.31E+1	1.00E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.62E+1	4.91E-1	5.60E+1	7.27E+1	1.04E-1	2.27E+0	1.19E-2	-5.99E+0	6.91E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.62E+1	4.91E-1	5.60E+1	7.27E+1	1.04E-1	2.27E+0	1.19E-2	-5.99E+0	6.91E+1
PENRE	MJ	9.36E+2	4.34E+1	9.43E+0	9.89E+2	7.71E+0	4.94E+1	3.79E-1	-5.06E+2	5.41E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.36E+2	4.34E+1	9.43E+0	9.89E+2	7.71E+0	4.94E+1	3.79E-1	-5.06E+2	5.41E+2
PET	MJ	9.53E+2	4.39E+1	6.54E+1	1.06E+3	7.81E+0	5.17E+1	3.90E-1	-5.12E+2	6.10E+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	2.68E-1	4.73E-3	1.36E-1	4.08E-1	8.22E-4	2.58E-2	4.36E-4	-1.25E-1	3.11E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.22E-4	9.81E-5	1.35E-5	2.33E-4	1.86E-5	7.50E-5	4.23E-7	-1.13E-4	2.14E-4
NHWD	kg	1.10E+0	2.39E+0	4.14E-2	3.53E+0	4.50E-1	2.26E+0	1.80E+0	-3.69E-1	7.67E+0
RWD	kg	4.18E-4	2.70E-4	3.76E-5	7.26E-4	4.94E-5	1.78E-4	2.35E-6	-2.02E-4	7.54E-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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