

Environmental Profile

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

Ecochain v3.5.64



Product: 3062138 - Wafix PP ML Pipe RD 160 SN4 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.03E+1	1.10E+0	5.19E-1	1.19E+1	1.91E-1	4.43E+0	6.30E-2	-6.15E+0	1.04E+1
GWP-f	kg CO2 eq	1.02E+1	1.10E+0	3.77E-1	1.17E+1	1.91E-1	4.42E+0	6.30E-2	-6.13E+0	1.03E+1
GWP-b	kg CO2 eq	3.41E-2	4.40E-4	9.90E-2	1.34E-1	1.16E-4	9.49E-3	5.71E-5	-2.16E-2	1.22E-1
GWP-luluc	kg CO2 eq	1.29E-2	4.30E-4	4.38E-2	5.71E-2	6.77E-5	1.08E-3	1.25E-6	-1.20E-3	5.70E-2
ODP	kg CFC11 eq	2.23E-7	2.42E-7	4.26E-8	5.07E-7	4.41E-8	1.41E-7	2.03E-9	-2.27E-7	4.67E-7
AP	mol H+ eq	3.75E-2	9.14E-3	3.19E-3	4.99E-2	1.09E-3	5.78E-3	4.66E-5	-1.74E-2	3.94E-2
EP-fw	kg P eq	1.61E-4	1.05E-5	6.95E-6	1.78E-4	1.57E-6	3.10E-5	5.59E-8	-6.99E-5	1.41E-4
EP-m	kg N eq	6.33E-3	2.88E-3	9.45E-4	1.02E-2	3.90E-4	1.66E-3	2.77E-5	-3.08E-3	9.15E-3
EP-T	mol N eq	7.14E-2	3.18E-2	1.04E-2	1.14E-1	4.30E-3	1.82E-2	1.90E-4	-3.42E-2	1.02E-1
POCP	kg NMVOC eq	3.20E-2	8.83E-3	2.88E-3	4.37E-2	1.23E-3	5.80E-3	6.78E-5	-1.57E-2	3.51E-2
ADP-mm	kg Sb eq	1.92E-4	2.61E-5	1.13E-5	2.30E-4	4.95E-6	2.34E-5	4.61E-8	-4.05E-5	2.18E-4
ADP-f	MJ	3.59E+2	1.64E+1	3.74E+0	3.79E+2	2.94E+0	1.88E+1	1.45E-1	-1.93E+2	2.08E+2
WDP	m3 depriv.	7.21E+0	5.58E-2	2.41E+0	9.68E+0	9.01E-3	3.61E-1	6.94E-4	-3.38E+0	6.66E+0
PM	disease inc.	3.33E-7	9.30E-8	5.38E-8	4.80E-7	1.73E-8	9.72E-8	9.83E-10	-1.46E-7	4.49E-7
IR	kBq U-235 eq	2.02E-1	6.89E-2	1.11E-2	2.82E-1	1.28E-2	5.66E-2	6.62E-4	-9.17E-2	2.60E-1
ETP-fw	CTUe	6.67E+1	1.43E+1	1.04E+1	9.14E+1	2.38E+0	2.10E+1	1.12E-1	-2.73E+1	8.76E+1
HTP-c	CTUh	3.03E-9	4.91E-10	4.12E-10	3.93E-9	8.48E-11	2.39E-9	3.16E-12	-1.03E-9	5.38E-9
HTP-nc	CTUh	7.57E-8	1.54E-8	1.12E-8	1.02E-7	2.84E-9	3.04E-8	7.08E-11	-2.47E-8	1.11E-7
SQP	Pt	1.59E+1	1.33E+1	4.92E-1	2.97E+1	2.51E+0	1.51E+1	3.60E-1	-5.37E+0	4.23E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.69E+0	1.97E-1	2.36E+1	3.25E+1	4.21E-2	9.20E-1	4.87E-3	-2.46E+0	3.10E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.69E+0	1.97E-1	2.36E+1	3.25E+1	4.21E-2	9.20E-1	4.87E-3	-2.46E+0	3.10E+1
PENRE	MJ	3.85E+2	1.74E+1	3.97E+0	4.07E+2	3.12E+0	2.00E+1	1.54E-1	-2.08E+2	2.22E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.85E+2	1.74E+1	3.97E+0	4.07E+2	3.12E+0	2.00E+1	1.54E-1	-2.08E+2	2.22E+2
PET	MJ	3.94E+2	1.76E+1	2.76E+1	4.39E+2	3.16E+0	2.09E+1	1.59E-1	-2.10E+2	2.53E+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	1.11E-1	1.90E-3	5.73E-2	1.71E-1	3.32E-4	1.05E-2	1.77E-4	-5.12E-2	1.30E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.30E-5	3.94E-5	5.70E-6	9.81E-5	7.51E-6	3.03E-5	1.72E-7	-4.71E-5	8.91E-5
NHWD	kg	4.87E-1	9.61E-1	1.75E-2	1.47E+0	1.82E-1	9.15E-1	7.27E-1	-1.52E-1	3.14E+0
RWD	kg	1.80E-4	1.08E-4	1.58E-5	3.04E-4	2.00E-5	7.20E-5	9.55E-7	-8.27E-5	3.14E-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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