

Environmental Profile

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

Ecochain v3.5.64



Product: 4055380 - Wafix PP Pipe GY 50 L=6 wo/socket
 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 | 3.40E+0 | 1.31E-1 | 1.18E-1 | 3.65E+0 | 4.43E-2 | 1.28E+0 | 2.08E-2 | -2.06E+0 | 2.94E+0 |
| GWP-f | kg CO2 eq | 3.39E+0 | 1.31E-1 | 8.53E-2 | 3.60E+0 | 4.42E-2 | 1.29E+0 | 2.09E-2 | -2.06E+0 | 2.90E+0 |
| GWP-b | kg CO2 eq | 1.55E-2 | 3.47E-5 | 2.24E-2 | 3.79E-2 | 2.69E-5 | -1.79E-3 | 1.82E-5 | -7.09E-3 | 2.91E-2 |
| GWP-luluc | kg CO2 eq | 8.85E-4 | 5.77E-5 | 9.91E-3 | 1.09E-2 | 1.57E-5 | 2.49E-4 | 3.54E-7 | -3.90E-4 | 1.07E-2 |
| ODP | kg CFC11 eq | 6.10E-8 | 2.82E-8 | 9.66E-9 | 9.89E-8 | 1.02E-8 | 3.24E-8 | 5.23E-10 | -7.58E-8 | 6.62E-8 |
| AP | mol H+ eq | 1.20E-2 | 1.78E-3 | 7.22E-4 | 1.45E-2 | 2.52E-4 | 1.36E-3 | 1.25E-5 | -5.80E-3 | 1.04E-2 |
| EP-fw | kg P eq | 5.04E-5 | 1.09E-6 | 1.57E-6 | 5.30E-5 | 3.64E-7 | 7.18E-6 | 1.62E-8 | -2.29E-5 | 3.77E-5 |
| EP-m | kg N eq | 2.00E-3 | 4.99E-4 | 2.14E-4 | 2.71E-3 | 9.01E-5 | 3.95E-4 | 8.12E-6 | -1.02E-3 | 2.18E-3 |
| EP-T | mol N eq | 2.25E-2 | 5.53E-3 | 2.35E-3 | 3.04E-2 | 9.93E-4 | 4.35E-3 | 5.06E-5 | -1.13E-2 | 2.44E-2 |
| POCP | kg NMVOC eq | 1.04E-2 | 1.48E-3 | 6.52E-4 | 1.26E-2 | 2.84E-4 | 1.38E-3 | 1.90E-5 | -5.25E-3 | 9.00E-3 |
| ADP-mm | kg Sb eq | 4.53E-5 | 2.62E-6 | 2.57E-6 | 5.05E-5 | 1.14E-6 | 5.40E-6 | 1.26E-8 | -1.36E-5 | 4.34E-5 |
| ADP-f | MJ | 1.20E+2 | 1.89E+0 | 8.47E-1 | 1.23E+2 | 6.79E-1 | 4.32E+0 | 3.82E-2 | -6.47E+1 | 6.35E+1 |
| WDP | m3 depriv. | 2.37E+0 | 5.68E-3 | 5.46E-1 | 2.92E+0 | 2.08E-3 | 8.45E-2 | 1.91E-4 | -1.12E+0 | 1.89E+0 |
| PM | disease inc. | 1.06E-7 | 9.53E-9 | 1.22E-8 | 1.27E-7 | 3.99E-9 | 2.24E-8 | 2.62E-10 | -4.87E-8 | 1.05E-7 |
| IR | kBq U-235 eq | 6.22E-2 | 7.98E-3 | 2.52E-3 | 7.27E-2 | 2.97E-3 | 1.30E-2 | 1.77E-4 | -2.99E-2 | 5.90E-2 |
| ETP-fw | CTUe | 1.82E+1 | 1.56E+0 | 2.36E+0 | 2.22E+1 | 5.51E-1 | 4.88E+0 | 3.19E-2 | -8.27E+0 | 1.93E+1 |
| HTP-c | CTUh | 9.24E-10 | 6.06E-11 | 9.33E-11 | 1.08E-9 | 1.96E-11 | 5.86E-10 | 9.31E-13 | -3.42E-10 | 1.34E-9 |
| HTP-nc | CTUh | 2.33E-8 | 1.61E-9 | 2.54E-9 | 2.74E-8 | 6.57E-10 | 7.26E-9 | 2.06E-11 | -8.01E-9 | 2.74E-8 |
| SQP | Pt | 4.13E+0 | 1.29E+0 | 1.11E-1 | 5.52E+0 | 5.81E-1 | 3.45E+0 | 9.79E-2 | -1.75E+0 | 7.91E+0 |
| Resource use | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
| PERE | MJ | 1.74E+0 | 2.07E-2 | 5.34E+0 | 7.11E+0 | 9.74E-3 | 2.13E-1 | 1.48E-3 | -8.01E-1 | 6.53E+0 |
| PERM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PERT | MJ | 1.74E+0 | 2.07E-2 | 5.34E+0 | 7.11E+0 | 9.74E-3 | 2.13E-1 | 1.48E-3 | -8.01E-1 | 6.53E+0 |
| PENRE | MJ | 1.29E+2 | 2.01E+0 | 9.00E-1 | 1.32E+2 | 7.21E-1 | 4.60E+0 | 4.05E-2 | -6.98E+1 | 6.78E+1 |
| PENRM | MJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PENRT | MJ | 1.29E+2 | 2.01E+0 | 9.00E-1 | 1.32E+2 | 7.21E-1 | 4.60E+0 | 4.05E-2 | -6.98E+1 | 6.78E+1 |
| PET | MJ | 1.31E+2 | 2.03E+0 | 6.24E+0 | 1.39E+2 | 7.30E-1 | 4.81E+0 | 4.20E-2 | -7.06E+1 | 7.43E+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 | 3.56E-2 | 1.95E-4 | 1.30E-2 | 4.88E-2 | 7.68E-5 | 2.49E-3 | 4.71E-5 | -1.68E-2 | 3.46E-2 |

| Output flows and waste categories | Unit | A1 | A2 | A3 | A1-A3 | C2 | C3 | C4 | D | Total |
|-----------------------------------|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| HWD | kg | 1.51E-5 | 4.00E-6 | 1.29E-6 | 2.04E-5 | 1.74E-6 | 7.02E-6 | 4.60E-8 | -1.59E-5 | 1.33E-5 |
| NHWD | kg | 1.33E-1 | 9.04E-2 | 3.95E-3 | 2.28E-1 | 4.21E-2 | 2.12E-1 | 1.68E-1 | -5.06E-2 | 5.99E-1 |
| RWD | kg | 5.38E-5 | 1.26E-5 | 3.58E-6 | 7.00E-5 | 4.62E-6 | 1.65E-5 | 2.49E-7 | -2.70E-5 | 6.45E-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 |



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